XR-CA650X

SERVICE MANUAL

US Model
Canadian Model

Ver 1.0 2002.12

Model Name Using Similar Mechanism	XR-CA630X
Tape Transport Mechanism Type	MG-25F-136

SPECIFICATIONS

AUDIO POWER SPECIFICATIONS (US model)

POWER OUTPUT AND TOTAL HARMONIC DISTORTION
23 watts per channel minimum continuous average power into 4 ohms, 4 channels driven from 20 Hz to 20 kHz with no more than 5% total harmonic distortion.

Cassette Player section

Tape track	4-track 2-channel stereo
Wow and flutter	0.08 % (WRMS)
Frequency response	30 – 18,000 Hz
Signal-to-noise ratio	

Cassette type	
TYPE II, IV	61 dB
TYPE I	58 dB

Tuner section

FM

Tuning range	87.5 – 107.9 MHz
Antenna terminal	External antenna connector
Intermediate frequency	10.7 MHz/450 kHz
Usable sensitivity	8 dBf
Selectivity	75 dB at 400 kHz
Signal-to-noise ratio	66 dB (stereo), 72 dB (mono)
Harmonic distortion at 1 kHz	0.6 % (stereo), 0.3 % (mono)
Separation	35 dB at 1 kHz
Frequency response	30 – 15,000 Hz

AM

Tuning range	530 – 1,710 kHz
Antenna terminal	External antenna connector
Intermediate frequency	10.7 MHz/450 kHz
Sensitivity	30 µV

Power amplifier section

Outputs	Speaker outputs (sure seal connectors)
Speaker impedance	4 – 8 ohms
Maximum power output	50 W × 4 (at 4 ohms)

General

Outputs	Audio outputs (rear) Power antenna relay control terminal Power amplifier control terminal
Inputs	BUS control input terminal BUS audio input terminal Remote controller input terminal Antenna input terminal
Tone controls	Bass ±10 dB at 62 Hz Treble ±10 dB at 16 kHz
Loudness	+8 dB at 100 Hz +2 dB at 10 kHz
Power requirements	12 V DC car battery (negative ground)
Dimensions	Approx. 178 × 50 × 177 mm ($7\ ^{1}/_{8} \times 2 \times 7\ ^{1}/_{8}$ in) (w/h/d)
Mounting dimensions	Approx. 182 × 53 × 161 mm ($7\ ^{1}/_{4} \times 2\ ^{1}/_{8} \times 6\ ^{3}/_{8}$ in) (w/h/d)
Mass	Approx. 1.2 kg (2 lb 10 oz)
Supplied accessories	Card remote commander RM-X119 Parts for installation and connections (1 set) Front panel case (1)

Note

This unit cannot be connected to a digital preamplifier or an equalizer which is Sony BUS system compatible.

Design and specifications are subject to change without notice.

FM/AM CASSETTE CAR STEREO

9-874-256-01
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Sony Corporation
e Vehicle Company
Published by Sony Engineering Corporation

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Notes on chip component replacement

- Never reuse a disconnected chip component.
- Notice that the minus side of a tantalum capacitor may be damaged by heat.

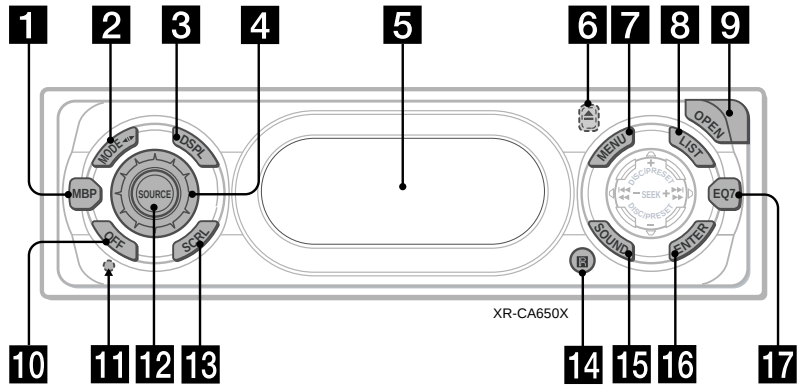
Flexible Circuit Board Repairing

- Keep the temperature of the soldering iron around 270 ˚C during repairing.
- Do not touch the soldering iron on the same conductor of the circuit board (within 3 times).
- Be careful not to apply force on the conductor when soldering or unsoldering.

SECTION 1
GENERAL

This section is extracted from instruction manual.

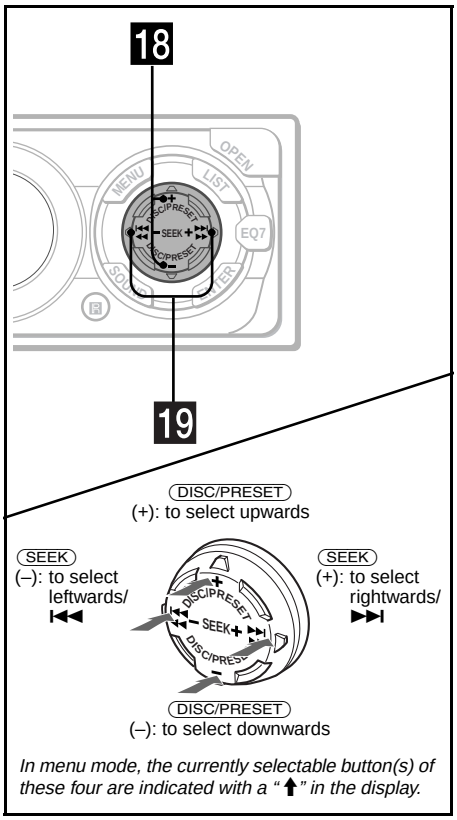
Location of controls



Refer to the pages listed for details.

1 MBP button
2 MODE (◄I►) button
To change the operation.
3 DSPL (display mode change) button
4 Volume control dial
5 Display window
6 ⏏ (eject) button (located on the front side of the unit, behind the front panel)
7 MENU button
To change the menus.
8 LIST button
9 OPEN button
10 OFF (Stop/Power off) button*
11 RESET button (located on the front side of the unit, behind the front panel)
12 SOURCE (Power on/Tape/Radio/CD/MD) button
To select the source.
13 SCRL (scroll) button
14 Receptor for the card remote commander
15 SOUND button
16 ENTER button
To enter a setting.
17 EQ7 button

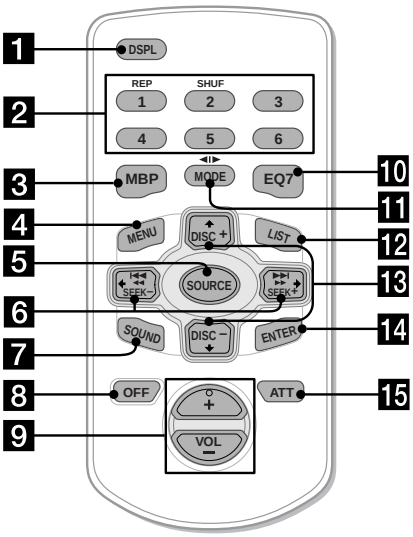
* **Warning when installing in a car without an ACC (accessory) position on the ignition switch**
After turning off the ignition, be sure to press and hold (OFF) on the unit until the display disappears.
Otherwise, the display does not turn off and this causes battery drain.



In menu mode, the currently selectable button(s) of these four are indicated with a "⬆" in the display.

18 DISC/PRESET buttons (+/–)
To receive preset stations, change the disc*1, skip albums*2, and select a menu.
*1 *When an optional CD/MD unit is connected.*
*2 *Available only when optional CD unit with the MP3 file control function is connected.*
19 SEEK buttons (–/+)
To skip tracks, fast-forward, reverse a track, tune in stations automatically, find a station manually, and select a setting.

Card remote commander RM-X119



The corresponding buttons of the card remote commander control the same functions as those on this unit.

1 DSPL button
2 Number buttons
(1) REP
(2) SHUF
To store stations, receive stored stations.
3 MBP button
4 MENU button
5 SOURCE button
6 SEEK (⬅/➡) buttons
7 SOUND button
8 OFF button
9 VOL (+/–) buttons
10 EQ7 button
11 MODE (◀I▶) button
12 LIST button
13 DISC (⬆/⬇) buttons
14 ENTER button
15 ATT button

Note
If the display disappears by pressing (OFF), it cannot be operated with the card remote commander unless (SOURCE) on the unit is pressed, or a disc is inserted to activate the unit first.

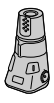
Tip
See "Replacing the lithium battery" on page 21 for details on how to replace the batteries.

Equipment used in illustrations (not supplied)
Appareils utilisés dans les illustrations (non fournis)

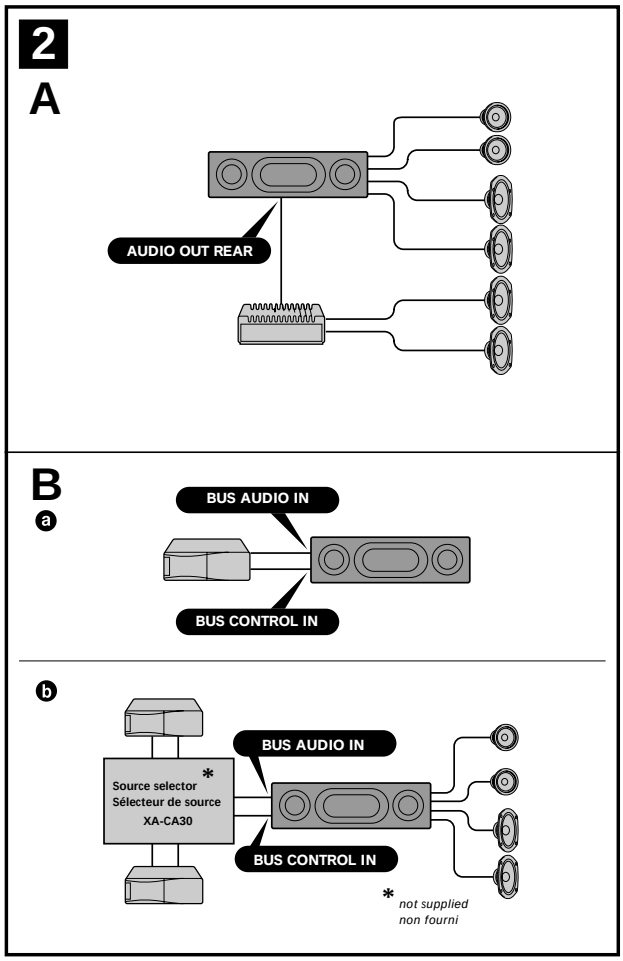
Front speaker
Haut-parleur avant

CD/MD changer
Changeur de CD/MD

Rear speaker
Haut-parleur arrière


Rotary commander RM-X4S
Satellite de commande RM-X4S

Power amplifier
Amplificateur de puissance



Cautions

- This unit is designed for negative ground 12 V DC operation only.
- Do not get the wires under a screw, or caught in moving parts (e.g. seat railing).
- Before making connections, turn the car ignition off to avoid short circuits.
- Connect the **yellow** and **red** power input leads only after all other leads have been connected.
- **Run all ground wires to a common ground point.**
- Be sure to insulate any loose unconnected wires with electrical tape for safety.

Notes on the power supply cord (yellow)

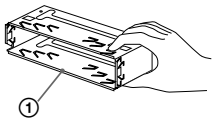
- When connecting this unit in combination with other stereo components, the connected car circuit's rating must be higher than the sum of each component's fuse.
- When no car circuits are rated high enough, connect the unit directly to the battery.

Parts list (1)

The numbers in the list are keyed to those in the instructions.

Caution

Handle the bracket ① carefully to avoid injuring your fingers.



Connection example (2)

***Notes* (2-A)**
- *Be sure to connect the ground cord before connecting the amplifier.*
- *If you connect an optional power amplifier and do not use the built-in amplifier, the beep sound will be deactivated.*

***Tip* (2-B-b)**
For connecting two or more CD/MD changers, the source selector XA-C30 (optional) is necessary.

Connection diagram (3)

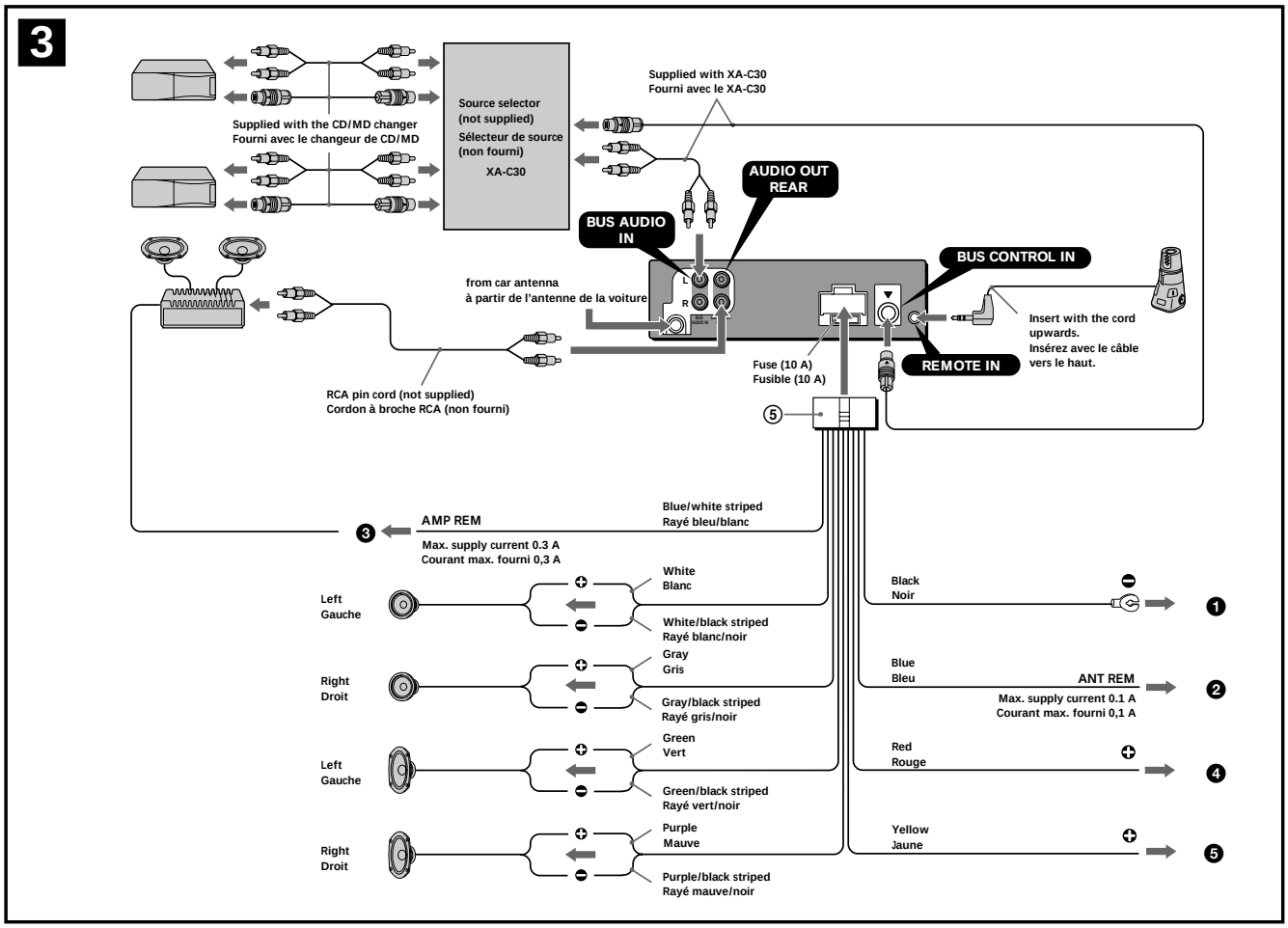
❶ To a metal surface of the car
First connect the black ground lead, then connect the yellow and red power input leads.

❷ To the power antenna control lead or power supply lead of antenna booster amplifier
Notes
- *It is not necessary to connect this lead if there is no power antenna or antenna booster, or with a manually-operated telescopic antenna.*
- *When your car has a built-in FM/AM antenna in the rear/side glass, see "Notes on the control and power supply leads."*

❸ To AMP REMOTE IN of an optional power amplifier
This connection is only for amplifiers. Connecting any other system may damage the unit.

❹ To the +12 V power terminal which is energized in the accessory position of the ignition key switch
Notes
- *If there is no accessory position, connect to the +12 V power (battery) terminal which is energized at all times.*
  Be sure to connect the black ground lead to a metal surface of the car first.
- *When your car has a built-in FM/AM antenna in the rear/side glass, see "Notes on the control and power supply leads."*

❺ To the +12 V power terminal which is energized at all times
Be sure to connect the black ground lead to a metal surface of the car first.



Notes on the control and power supply leads

- *The power antenna control lead (blue) supplies +12 V DC when you turn on the tuner.*
- *When your car has built-in FM/AM antenna in the rear/side glass, connect the power antenna control lead (blue) or the accessory power input lead (red) to the power terminal of the existing antenna booster. For details, consult your dealer.*
- *A power antenna without relay box cannot be used with this unit.*

Memory hold connection

When the yellow power input lead is connected, power will always be supplied to the memory circuit even when the ignition key is turned off.

Notes on speaker connection

- *Before connecting the speakers, turn the unit off.*
- *Use speakers with an impedance of 4 to 8 ohms, and with adequate power handling capacities to avoid its damage.*
- *Do not connect the speaker terminals to the car chassis, or connect the terminals of the right speakers with those of the left speaker.*
- *Do not connect the ground lead of this unit to the negative (–) terminal of the speaker.*
- *Do not attempt to connect the speakers in parallel.*
- *Connect only passive speakers. Connecting active speakers (with built-in amplifiers) to the speaker terminals may damage the unit.*
- *To avoid a malfunction, do not use the built-in speaker wires installed in your car if the unit shares a common negative (–) lead for the right and left speakers.*
- *Do not connect the unit's speaker cords to each other.*

Précautions

- Cet appareil est conçu pour fonctionner sur courant continu de 12 V CC avec masse négative.
- Évitez de fixer des vis sur les câbles ou de coincer ceux-ci dans des pièces mobiles (par exemple, armature de siège).
- Avant d'effectuer des raccordements, éteignez le moteur pour éviter les courts-circuits.
- Branchez les fils d'entrée d'alimentation **jaune** et **rouge** seulement après avoir terminé tous les autres branchements.
- **Rassemblez tous les fils de terre en un point de masse commun.**
- Veillez à fixer avec du ruban isolant tout fil lâche non raccordé.

Remarques sur le cordon d'alimentation (jaune)

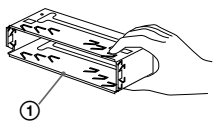
- Lorsque cet appareil est raccordé à d'autres éléments stéréo, la valeur nominale du circuit raccordé de la voiture doit être supérieure à la somme des fusibles de chaque élément.
- Si aucun circuit de la voiture n'est assez puissant, raccordez directement l'appareil à la batterie.

Liste des composants (1)

Les numéros de l'illustration correspondent à ceux des instructions.

Attention

Manipulez avec précaution le support ① pour éviter de vous blesser aux doigts.



Exemple de raccordement (2)

***Remarques* (2-A)**

- *Raccordez d'abord le fil de masse avant de connecter l'amplificateur.*
- *Si vous raccordez un amplificateur de puissance et que vous n'utilisez pas l'amplificateur intégré, le bip sonore est désactivé.*

***Conseil* (2-B-b)**

Dans le cas du raccordement de deux changeurs de CD/MD ou plus, le sélecteur de source XA-C30 (en option) est nécessaire.

Schémas de connexion(3)

❶ À un point métallique de la voiture

Branchez d'abord le fil de masse noir et, ensuite, les fils d'entrée d'alimentation jaune et rouge.

❷ Vers le fil de commande de l'antenne électrique ou le fil d'alimentation de l'amplificateur d'antenne

Remarques

- *Il n'est pas nécessaire de raccorder ce fil s'il n'y a pas d'antenne électrique ni d'amplificateur d'antenne, ou avec une antenne télescopique manuelle.*
- *Si votre voiture est équipée d'une antenne FM/AM intégrée dans la vitre arrière/latérale, voir "Remarques sur les fils de commande et d'alimentation".*

❸ Pour effectuer le raccordement à AMP REMOTE IN de l'amplificateur de puissance en option

Ce raccordement s'applique uniquement aux amplificateurs. Le branchement de tout autre système risque d'endommager l'appareil.

❹ À la borne +12 V qui est alimentée quand la clé de contact est sur la position accessoires

Remarques

- *S'il n'y a pas de position accessoires, raccordez la borne d'alimentation (batterie) +12 V qui est toujours sous tension.*
  Raccordez d'abord le fil de masse noir à un point métallique de la voiture.
- *Si votre voiture est équipée d'une antenne FM/AM intégrée dans la vitre arrière/latérale, voir "Remarques sur les fils de commande et d'alimentation".*

❺ À la borne +12 V qui est alimentée en permanence

Raccordez d'abord le fil de masse noir à un point métallique de la voiture.

Remarques sur les fils de commande et d'alimentation

- *Le fil de commande de l'antenne électrique (bleu) fournit une alimentation de + 12 V CC lorsque vous mettez l'appareil sous tension.*
- *Si votre voiture est équipée d'une antenne FM/AM intégrée dans la vitre arrière latérale, vous devez raccorder le fil de commande d'antenne électrique (bleu) ou le fil d'entrée d'alimentation d'accessoire (rouge) à la borne d'alimentation de l'amplificateur d'antenne existant. Pour plus de détails, consultez votre détaillant.*
- *Une antenne électrique sans boîtier de relais ne peut pas être utilisée avec cet appareil.*

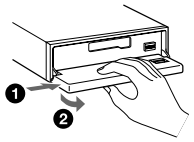
Connexion pour la conservation de la mémoire

Lorsque le fil d'entrée d'alimentation jaune est raccordé, le circuit de la mémoire est alimenté en permanence même si la clé de contact est sur la position d'arrêt.

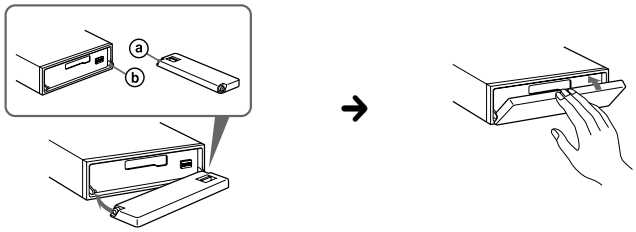
Remarques sur le raccordement des haut-parleurs

- *Avant de raccorder les haut-parleurs, mettez l'appareil hors tension.*
- *Utilisez des haut-parleurs ayant une impédance de 4 à 8 ohms et une capacité adéquate pour éviter de les endommager.*
- *Ne raccordez pas les bornes du système de haut-parleur au châssis de la voiture et ne raccordez pas les bornes du haut-parleur droit à celles du haut-parleur gauche.*
- *Ne raccordez pas le câble de masse de cet appareil à la borne négative (–) du haut-parleur.*
- *N'essayez pas de raccorder les haut-parleurs en parallèle.*
- *Raccordez uniquement des haut-parleurs passifs. Le raccordement de haut-parleurs actifs (avec amplificateurs intégrés) aux bornes des haut-parleurs peut endommager l'appareil.*
- *Pour éviter tout dysfonctionnement, n'utilisez pas les fils des haut-parleurs intégrés installés dans votre voiture si l'appareil partage un fil négatif commun (–) pour les haut-parleurs droit et gauche.*
- *Ne raccordez pas entre eux les fils des haut-parleurs de l'appareil.*

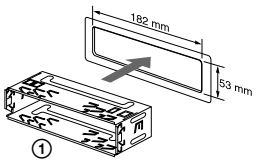
4 A



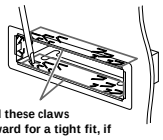
B



5 1



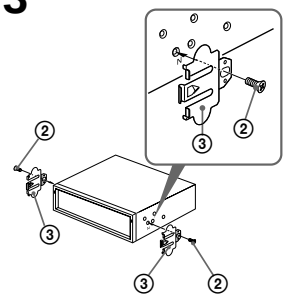
2



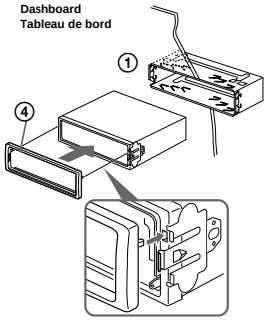
Bend these claws outward for a tight fit, if necessary.

Plier ces griffes vers l'extérieur pour assurer une prise correcte si nécessaire.

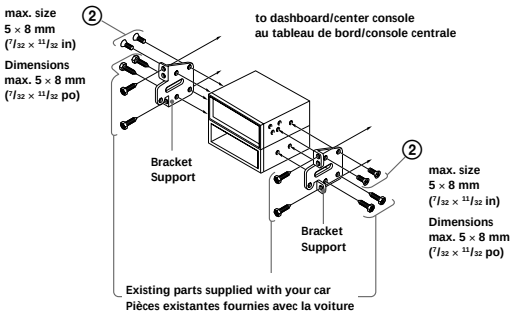
3



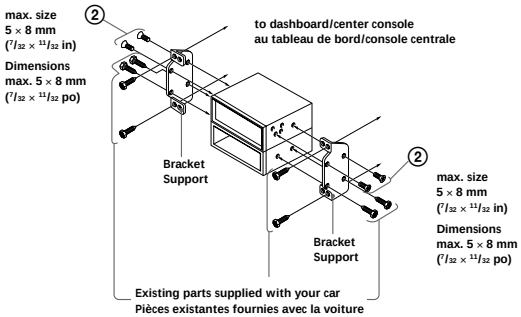
4



6 A TOYOTA



B NISSAN



Precautions

- Choose the installation location carefully so that the unit will not interfere with normal driving operations.
- Avoid installing the unit in areas subject to dust, dirt, excessive vibration, or high temperatures, such as in direct sunlight or near heater ducts.
- Use only the supplied mounting hardware for a safe and secure installation.
- There must be a distance of at least 15 cm between the cassettes slot of the unit and shift lever to insert cassette easily. Choose the installation location carefully so the unit does not interfere with gear shifting and other driving operations.

Mounting angle adjustment

Adjust the mounting angle to less than 20°.

How to detach and attach the front panel (4)

Before installing the unit, detach the front panel.

4-A To detach

Before detaching the front panel, be sure to press (OFF). Press (OPEN), then slide the front panel to the right side, and pull out the left side.

4-B To attach

Place the hole ⓐ in the front panel onto the spindle ⓑ on the unit as illustrated, then push the left side in.

Mounting example (5)

Installation in the dashboard

Mounting the unit in a Japanese car (6)

You may not be able to install this unit in some makes of Japanese cars. In such a case, consult your Sony dealer.

Note

To prevent malfunction, install only with the supplied screws ②.

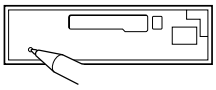
Warning when installing in a car without ACC (accessory) position on the ignition key switch

After turning off the ignition, be sure to press and hold (OFF) on the unit until the display disappears.

Otherwise, the display does not turn off and this causes battery drain.

RESET button

When the installation and connections are completed, be sure to press the RESET button with a ball-point pen, etc., after detaching the front panel.



Précautions

- Choisissez soigneusement l'emplacement d'installation pour que l'appareil ne gêne pas le chauffeur pendant la conduite.
- Évitez d'installer l'appareil dans un endroit exposé à la poussière, à la saleté, à des vibrations excessives ou à des températures élevées comme en plein soleil ou à proximité de conduits de chauffage.
- Pour garantir un montage sûr, n'utilisez que le matériel d'installation fourni.
- Pour pouvoir introduire et éjecter aisément la cassette, il doit y avoir une distance d'au moins 15 cm entre le logement de la cassette de l'appareil et le levier de changement de vitesses. Choisissez l'endroit de montage de telle façon que l'appareil ne gêne pas le maniement du levier de changement de vitesses ou toute autre opération de conduite.

Réglage de l'angle de montage

Ajuster l'inclinaison à un angle inférieur à 20°.

Retrait et pose de la façade (4)

Avant d'installer l'appareil, retirez la façade.

4-A Pour retirer

Avant de retirer la façade, n'oubliez pas d'appuyer d'abord sur (OFF). Appuyez sur (OPEN), puis faites glisser la façade vers la droite et retirez-la par la gauche

4-B Pour poser

Enfilez l'orifice ⓐ de la façade sur la tige ⓑ de l'appareil, comme indiqué sur l'illustration, puis appuyez sur le côté gauche ou un autre objet pointu.

Exemple de montage (5)

Installation dans le tableau de bord

Installation de l'appareil dans une voiture japonaise (6)

Cet appareil ne peut pas être installé dans certaines voitures japonaise. Consultez, dans ce cas, votre détaillant Sony.

Remarque

Pour éviter tout dysfonctionnement, utilisez uniquement les vis ② pour le montage.

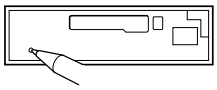
Avertissement en cas d'installation dans une voiture dont le contact ne comporte pas de position ACC (accessoires)

Après avoir coupé le moteur, n'oubliez pas de maintenir la touche (OFF) enfoncée sur l'appareil jusqu'à ce que l'affichage disparaisse.

Sinon, l'affichage n'est pas désactivé et la batterie du véhicule se décharge.

Touche RESET

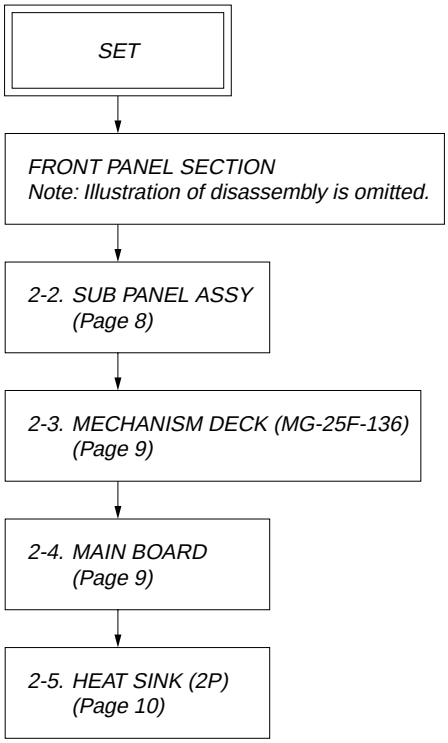
Une fois que l'installation et les raccordements sont terminés, retirez la façade et appuyez sur le bouton RESET à l'aide d'un stylo à bille ou d'un autre objet pointu.



SECTION 2
DISASSEMBLY

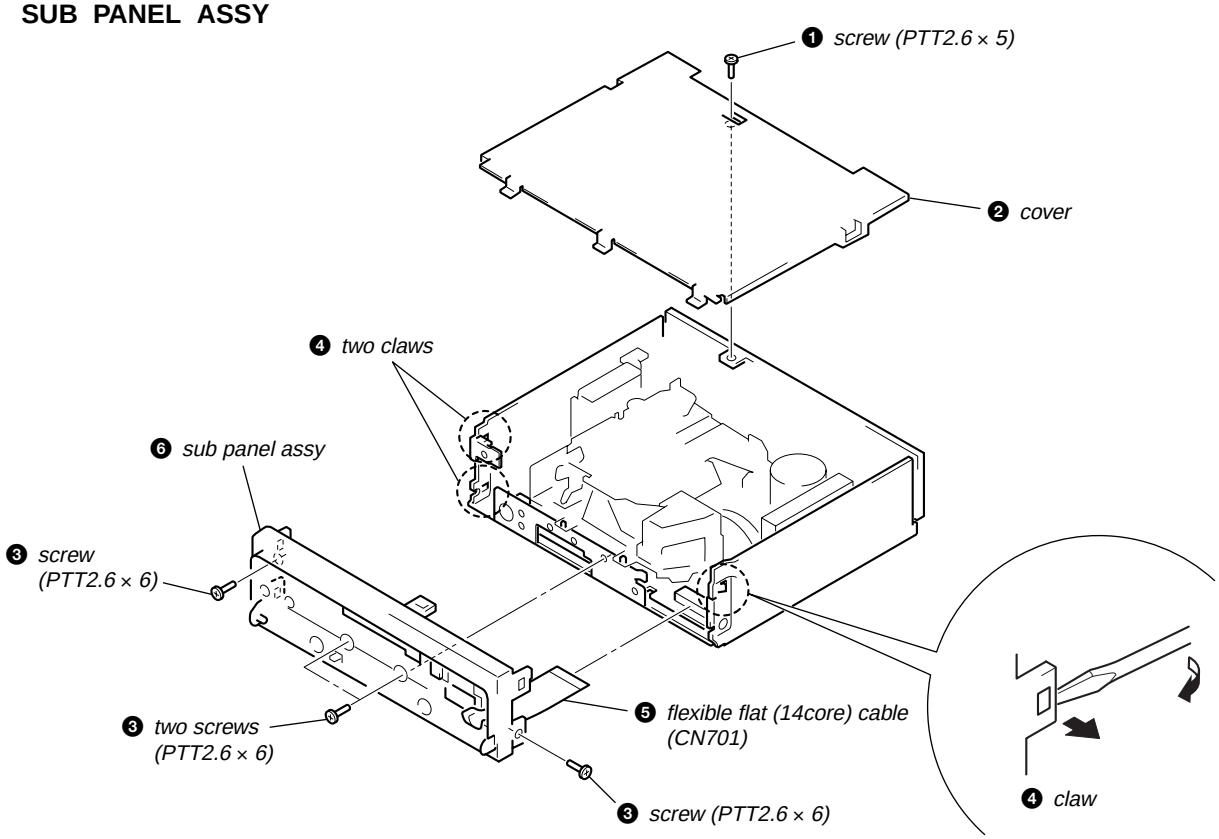
• This set can be disassembled in the order shown below.

2-1. DISASSEMBLY FLOW

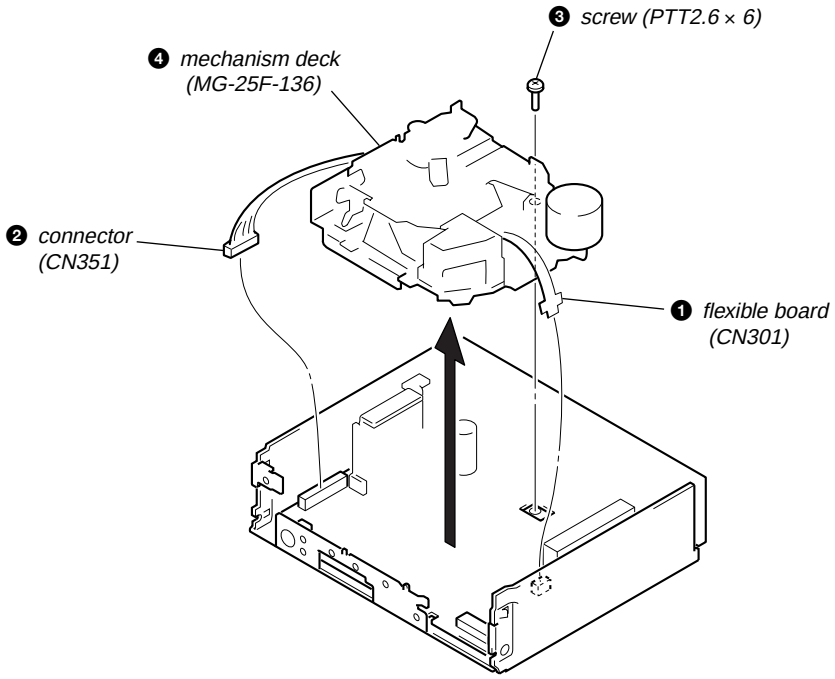


Note: Follow the disassembly procedure in the numerical order given.

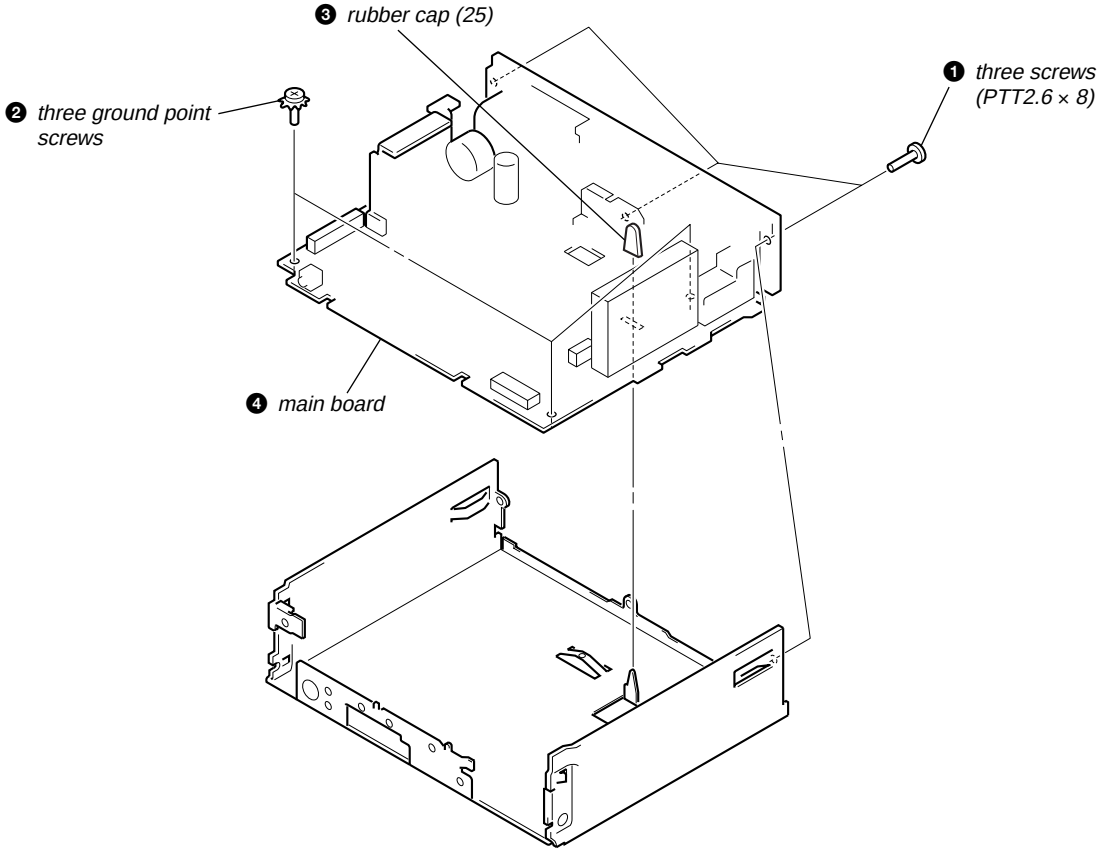
2-2. SUB PANEL ASSY



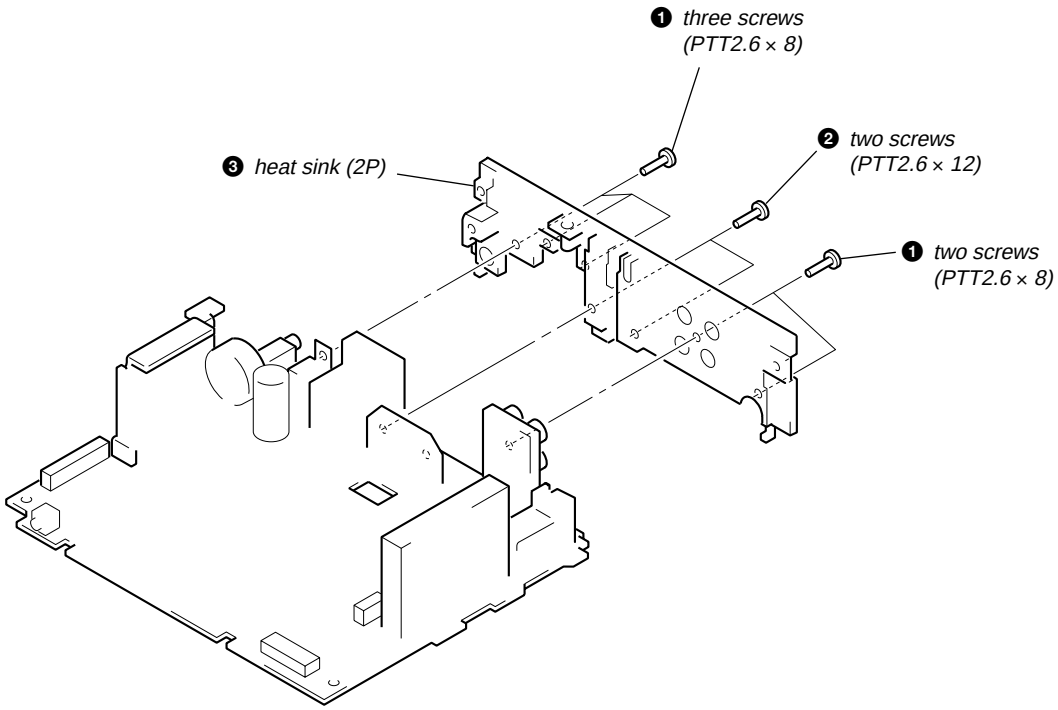
2-3. MECHANISM DECK (MG-25F-136)



2-4. MAIN BOARD



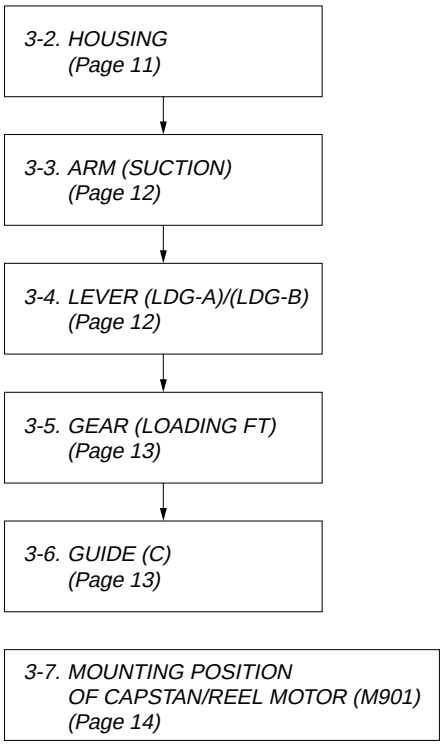
2-5. HEAT SINK (2P)



SECTION 3
ASSEMBLY OF MECHANISM DECK

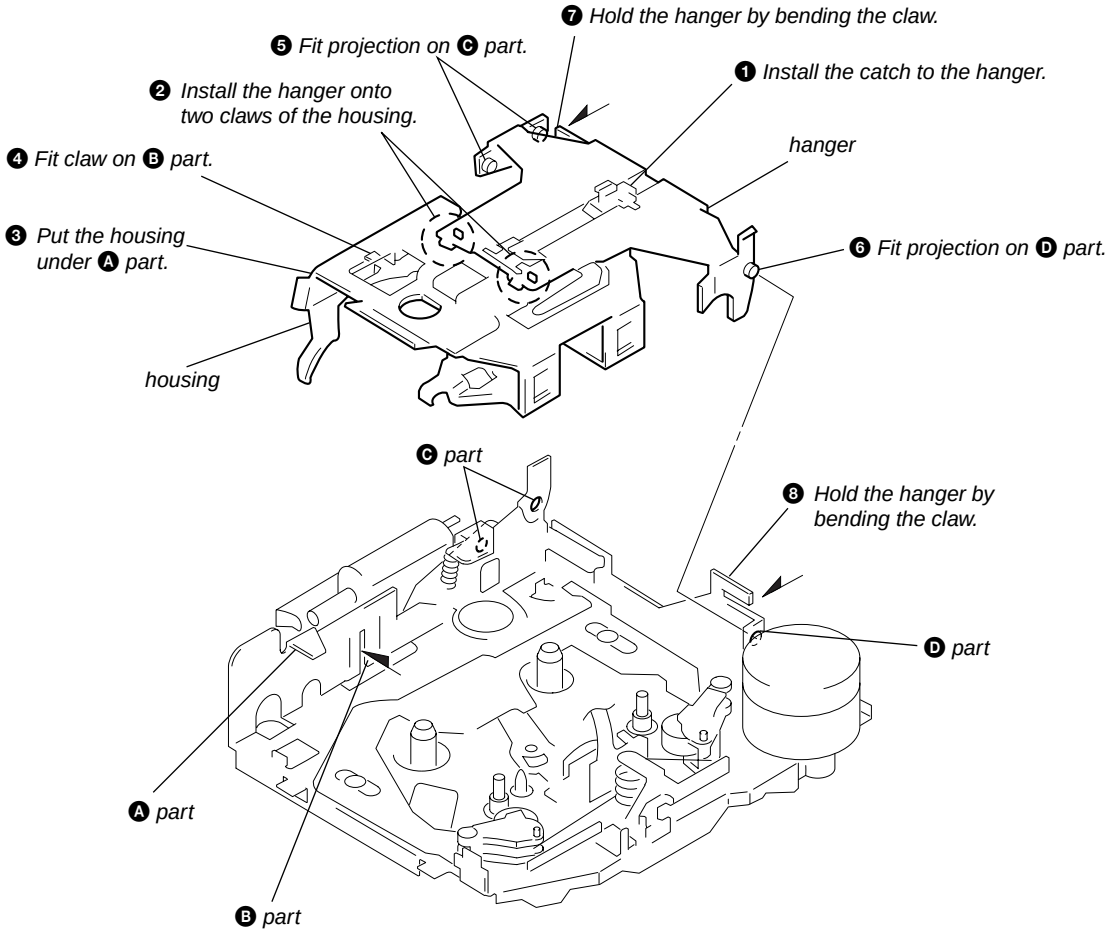
• This set can be assembled in the order shown below.

3-1. ASSEMBLY FLOW

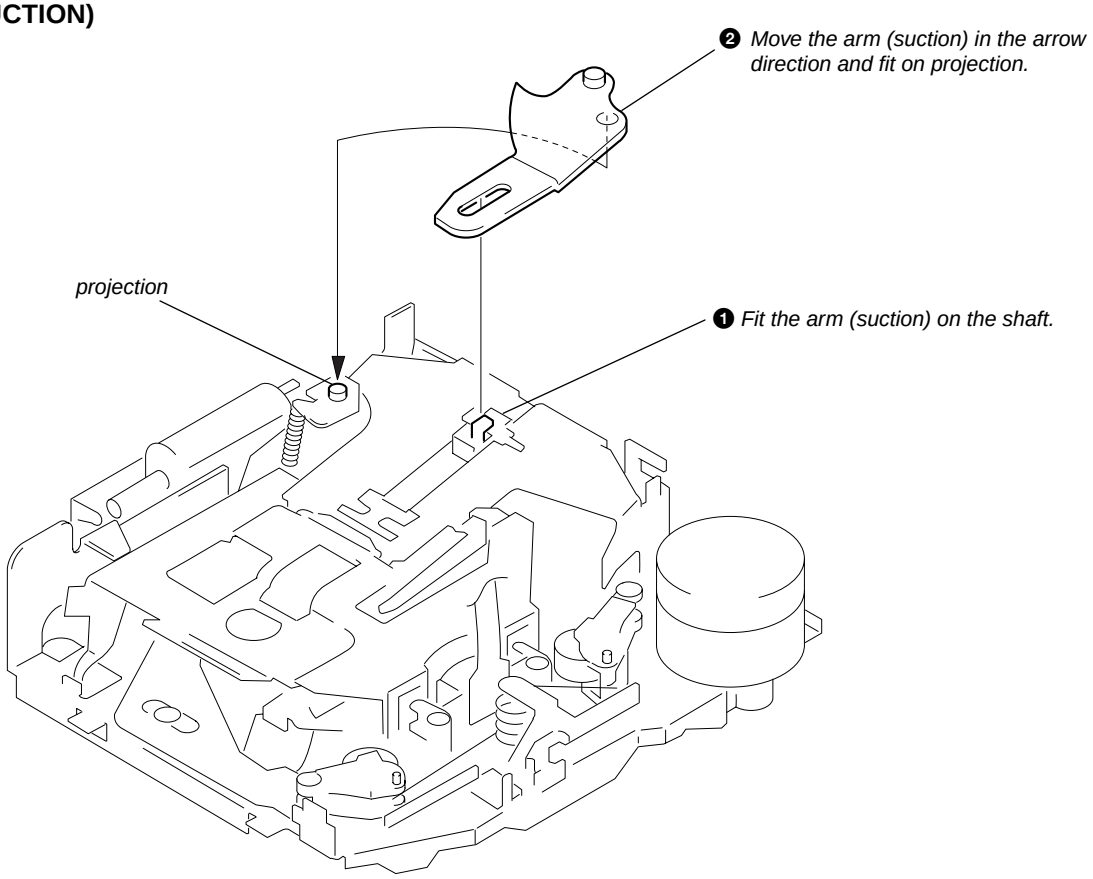


Note: Follow the assembly procedure in the numerical order given.

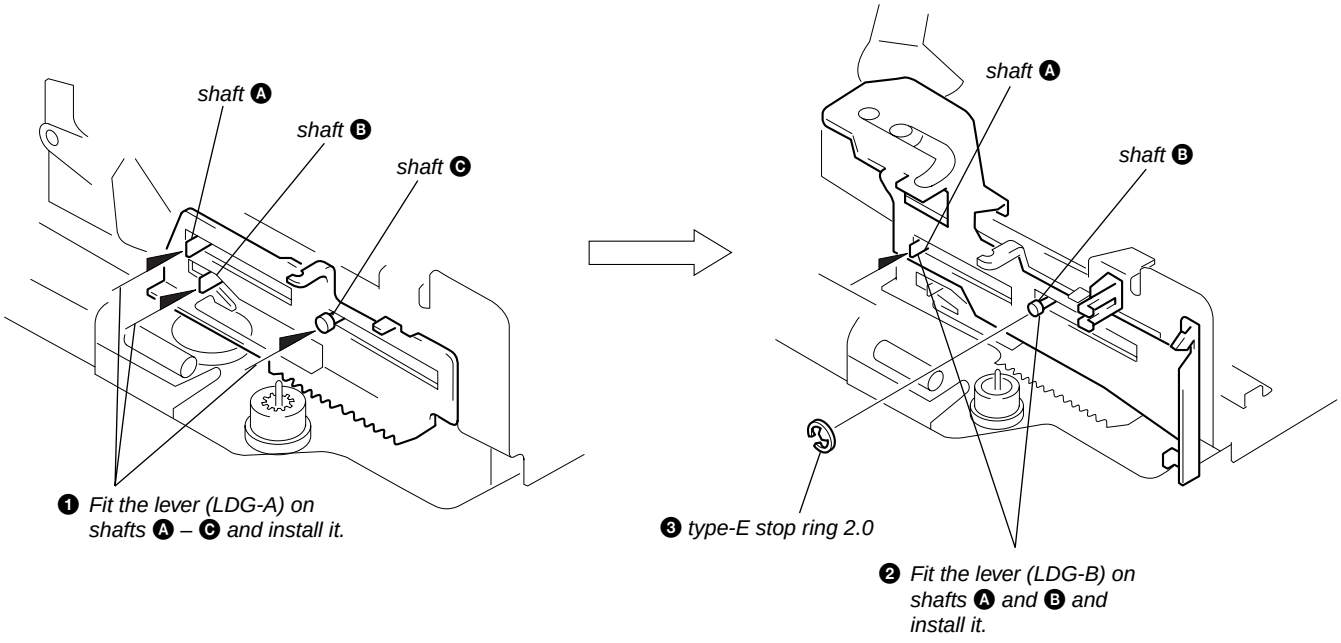
3-2. HOUSING


❼ Hold the hanger by bending the claw.
❺ Fit projection on Ⓒ part.
❶ Install the catch to the hanger.
❷ Install the hanger onto two claws of the housing.
hanger
❹ Fit claw on Ⓑ part.
❸ Put the housing under Ⓐ part.
❻ Fit projection on Ⓓ part.
housing
Ⓒ part
❽ Hold the hanger by bending the claw.
Ⓓ part
Ⓐ part
Ⓑ part

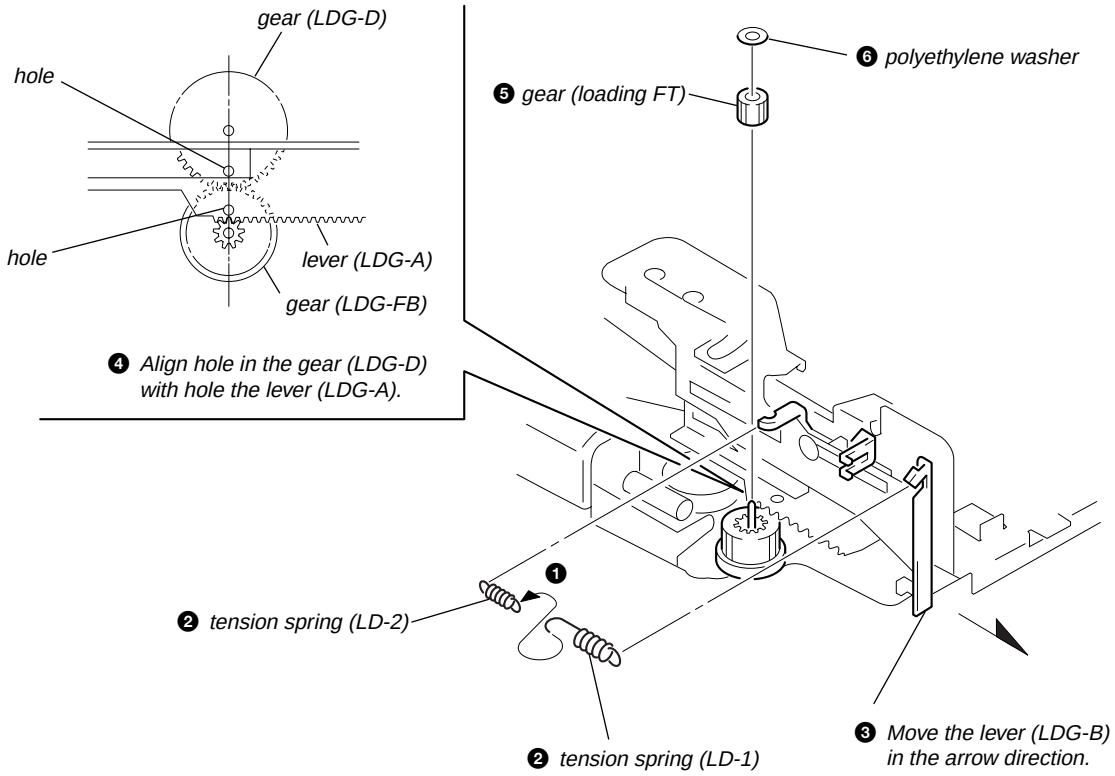
3-3. ARM (SUCTION)



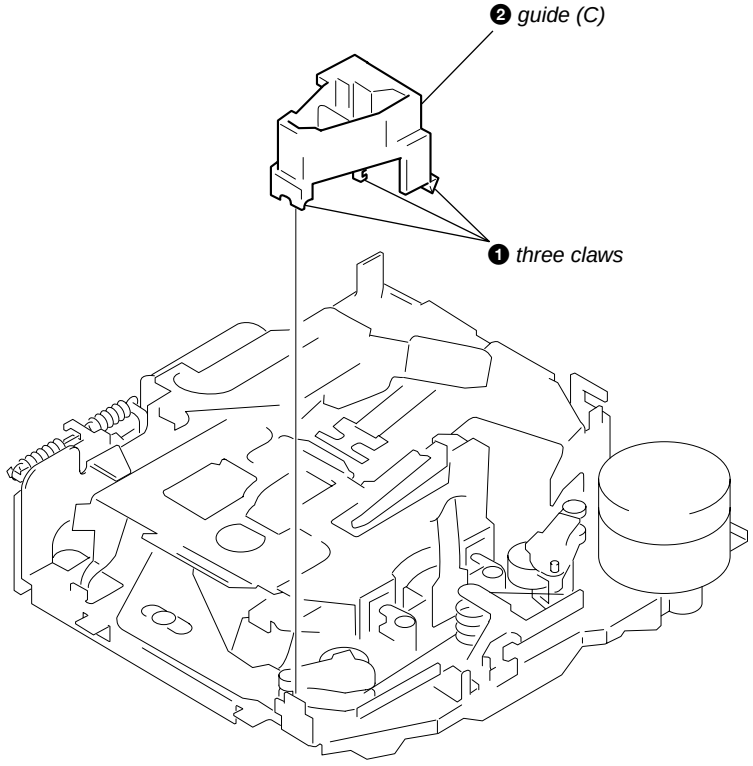
3-4. LEVER (LDG-A) / (LDG-B)


shaft Ⓐ
shaft Ⓑ
shaft Ⓒ
❶ Fit the lever (LDG-A) on shafts Ⓐ – Ⓒ and install it.
shaft Ⓐ
shaft Ⓑ
❸ type-E stop ring 2.0
❷ Fit the lever (LDG-B) on shafts Ⓐ and Ⓑ and install it.

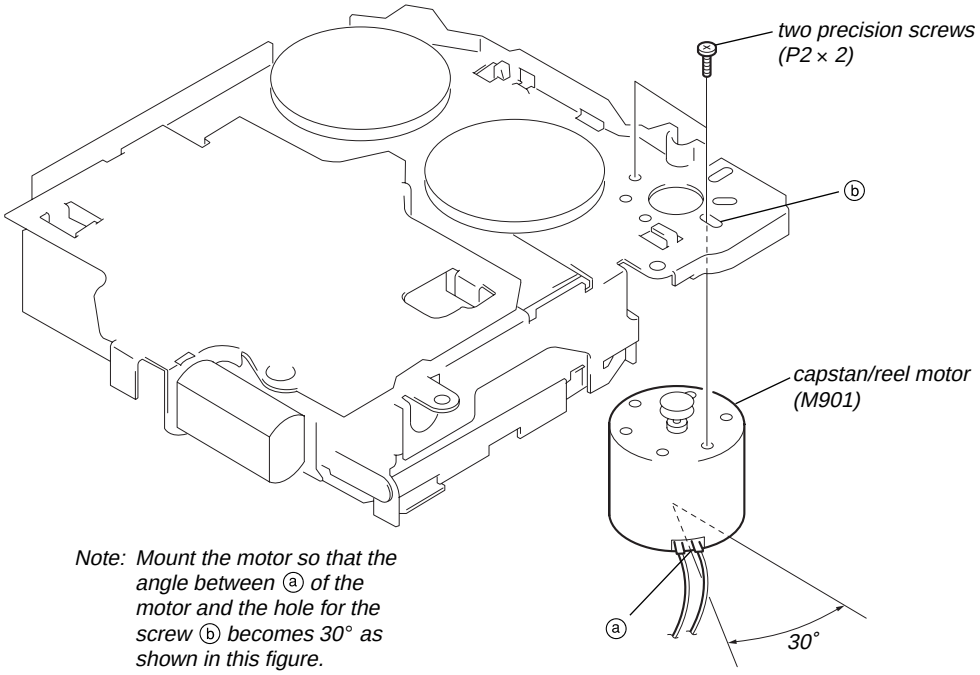
3-5. GEAR (LOADING FT)



3-6. GUIDE (C)



3-7. MOUNTING POSITION OF CAPSTAN/REEL MOTOR (M901)



Note: Mount the motor so that the angle between ⓐ of the motor and the hole for the screw ⓑ becomes 30° as shown in this figure.

SECTION 4
MECHANICAL ADJUSTMENTS

1. Clean the following parts with a denatured-alcohol-moistened swab:
   playback head pinch roller
   rubber belt capstan
   idler
2. Demagnetize the playback head with a head demagnetizer.
3. Do not use a magnetized screwdriver for the adjustments.
4. The adjustments should be performed with the power supply voltage (14.4 V) unless otherwise noted.

TORQUE MEASUREMENT

Mode	Torque Meter	Meter Reading
Forward	CQ-102C	2.95 – 6.37 mN•m (30 – 65 g•cm) (0.42 – 0.90 oz•inch)
Forward Back Tension	CQ-102C	0.05 – 0.44 mN•m (0.5 – 4.5g•cm) (0.01 – 0.06 oz•inch)
Reverse	CQ-102RC	2.95 – 6.37 mN•m (30 – 65 g•cm) (0.42 – 0.90 oz•inch)
Reverse Back Tension	CQ-102RC	0.05 – 0.44 mN•m (0.5 – 4.5g•cm) (0.01 – 0.06 oz•inch)
FF, REW	CQ-201B	5.89 – 19.61 mN•m (60 – 200 g•cm) (0.83 – 2.78 oz•inch)

TAPE TENSION MEASUREMENT

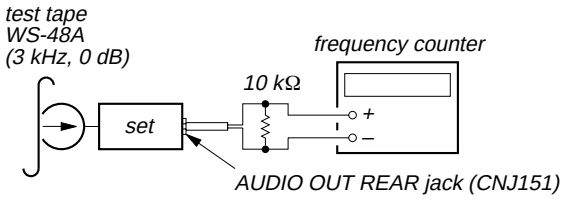
Mode	Tension Meter	Meter Reading
Forward	CQ-403A	more than 60 g (more than 2.12 oz)
Reverse	CQ-403R	more than 60 g (more than 2.12 oz)

SECTION 5
ELECTRICAL ADJUSTMENTS

TAPE DECK SECTION | 0 dB=0.775 V

TAPE SPEED ADJUSTMENT

Setting:



Procedure:

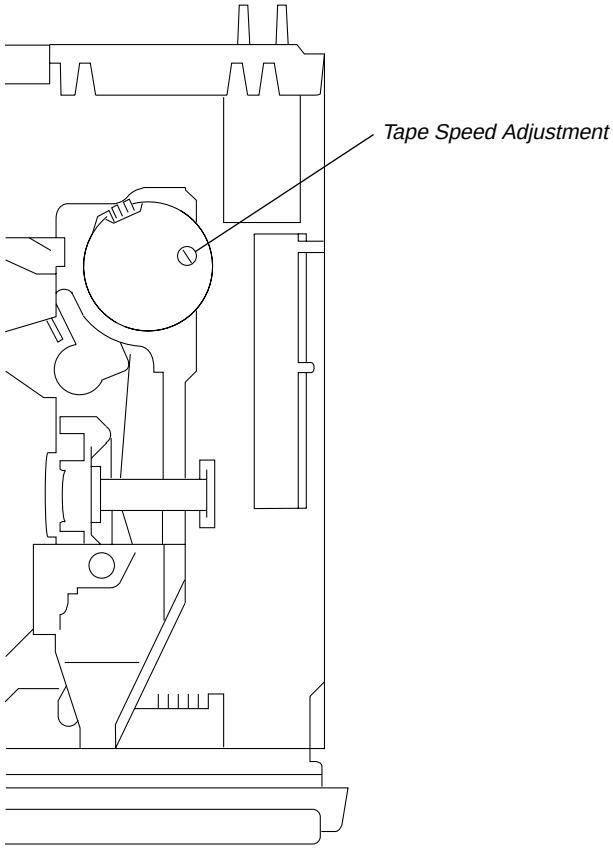
1. Put the set into the FWD PB mode.
2. Adjust adjustment resistor for inside capstan motor so that the reading on the frequency counter becomes 3,000 Hz.

Specification: Constant speed

Frequency counter
2,955 to 3,075 Hz

Adjustment Location:

– SET UPPER VIEW –



TUNER SECTION

Tuner section adjustments are done automatically in this set.

SECTION 6
DIAGRAMS

6-1. NOTE FOR PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS

Note on Printed Wiring Board:

- ○——— : parts extracted from the component side.
- ——— : parts extracted from the conductor side.
- ▬ : Pattern from the side which enables seeing.

(The other layers' patterns are not indicated.)

Caution:	
Pattern face side: (Conductor Side)	Parts on the pattern face side seen from the pattern face are indicated.
Parts face side: (Component Side)	Parts on the parts face side seen from the parts face are indicated.

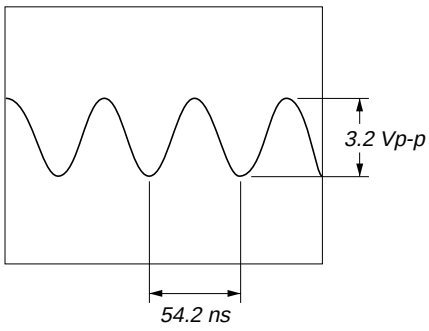
Note on Schematic Diagram:

- All capacitors are in μF unless otherwise noted. pF: μμF 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4 W or less unless otherwise specified.
- ▭ : panel designation.
- ▬ : B+ Line.
- Power voltage is dc 14.4V and fed with regulated dc power supply from ACC and BATT cords.
- Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.
  no mark : FM
  ( ) : AM
  [ ] : TAPE PLAYBACK
- Voltages are taken with a VOM (Input impedance 10 MΩ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
  ⇨ : FM
  ➡ : AM
  ⇨ : TAPE PLAYBACK
  ⇨ : BUS AUDIO IN

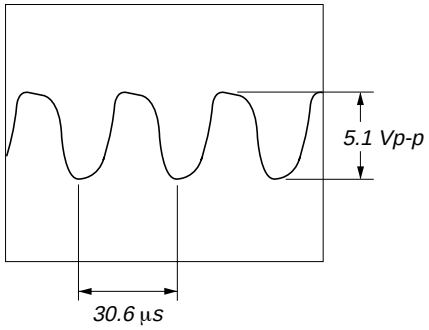
- **Waveforms**

– MAIN Board –

❶ IC501 ⑫ (OSCOUT)

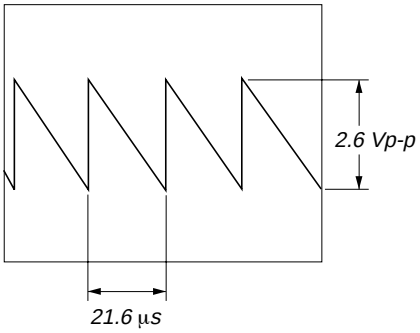


❷ IC501 ⑯ (XOUT)

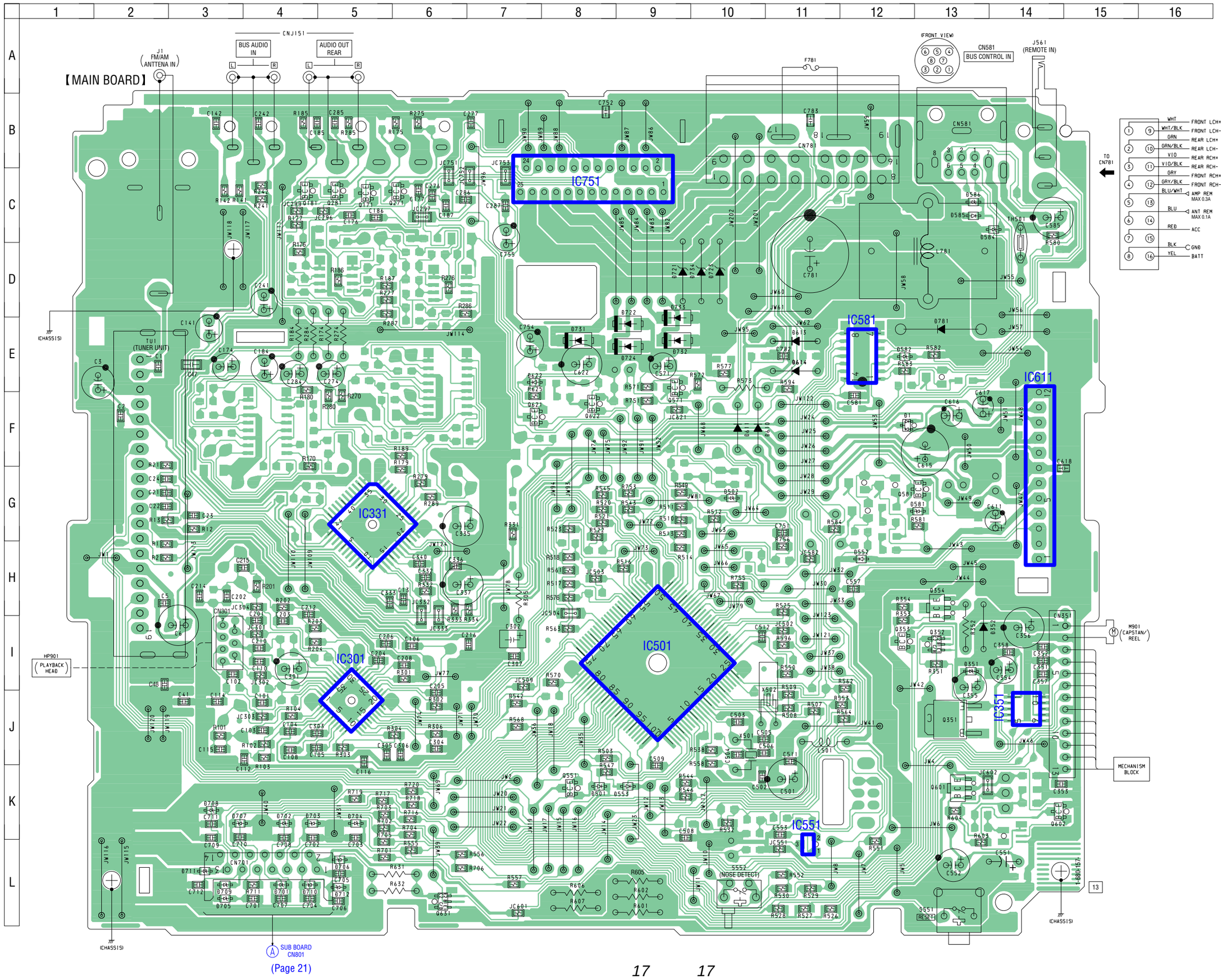


– KEY Board –

❸ IC901 ㊻ (OSC)



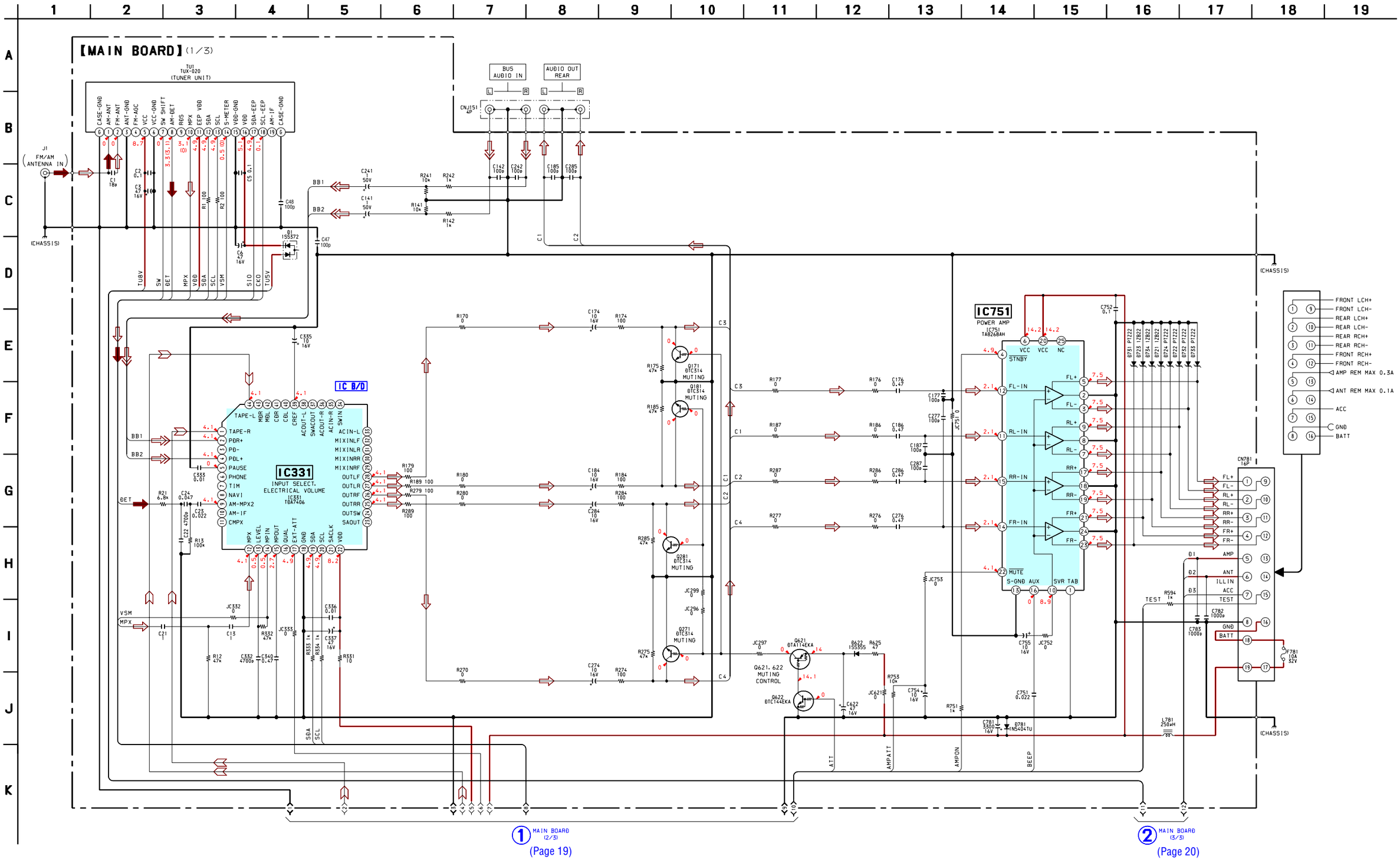
6-2. PRINTED WIRING BOARD – MAIN Board –



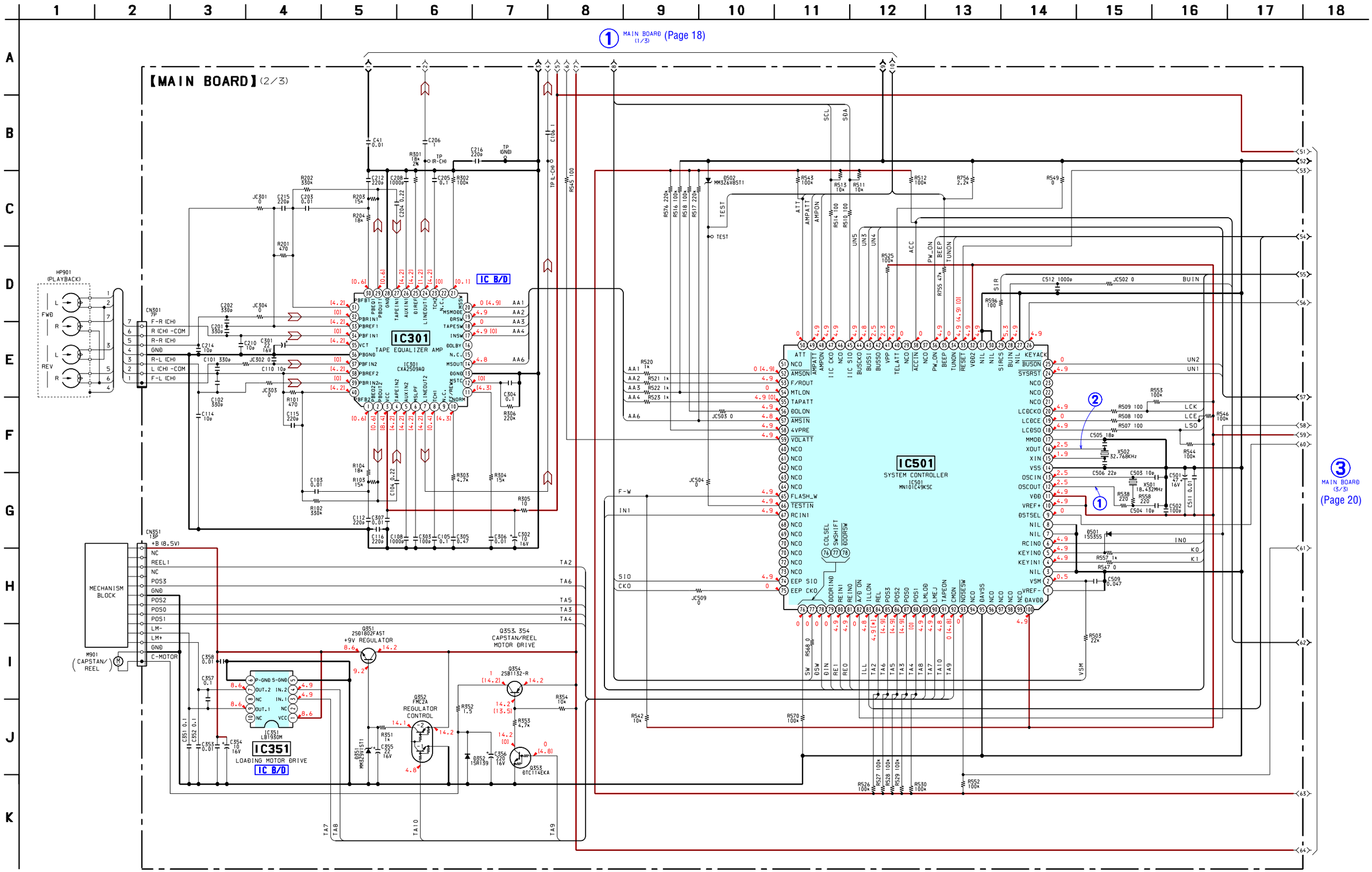
- **Semiconductor Location**

Ref. No.	Location
D1	F-12
D351	I-13
D352	I-13
D501	K-8
D502	G-10
D552	H-12
D553	K-9
D581	G-13
D582	E-12
D584	C-14
D585	C-13
D586	C-13
D610	F-10
D611	F-10
D613	E-11
D614	E-11
D622	E-7
D701	L-4
D702	K-4
D703	K-4
D704	K-5
D705	L-3
D706	G-5
D707	K-3
D708	K-3
D709	L-3
D710	L-4
D711	L-3
D712	G-5
D721	D-9
D722	E-9
D723	D-10
D724	E-9
D731	E-8
D732	E-9
D733	E-9
D734	D-10
D781	E-13
IC301	J-5
IC331	G-5
IC351	J-14
IC501	I-9
IC551	L-11
IC581	E-12
IC611	G-14
IC751	C-8
Q171	C-5
Q181	C-4
Q271	C-6
Q281	C-5
Q351	J-13
Q352	I-13
Q353	I-12
Q354	H-13
Q551	K-8
Q571	E-9
Q581	G-13
Q601	K-13
Q602	K-14
Q621	F-7
Q622	F-8
Q631	L-6

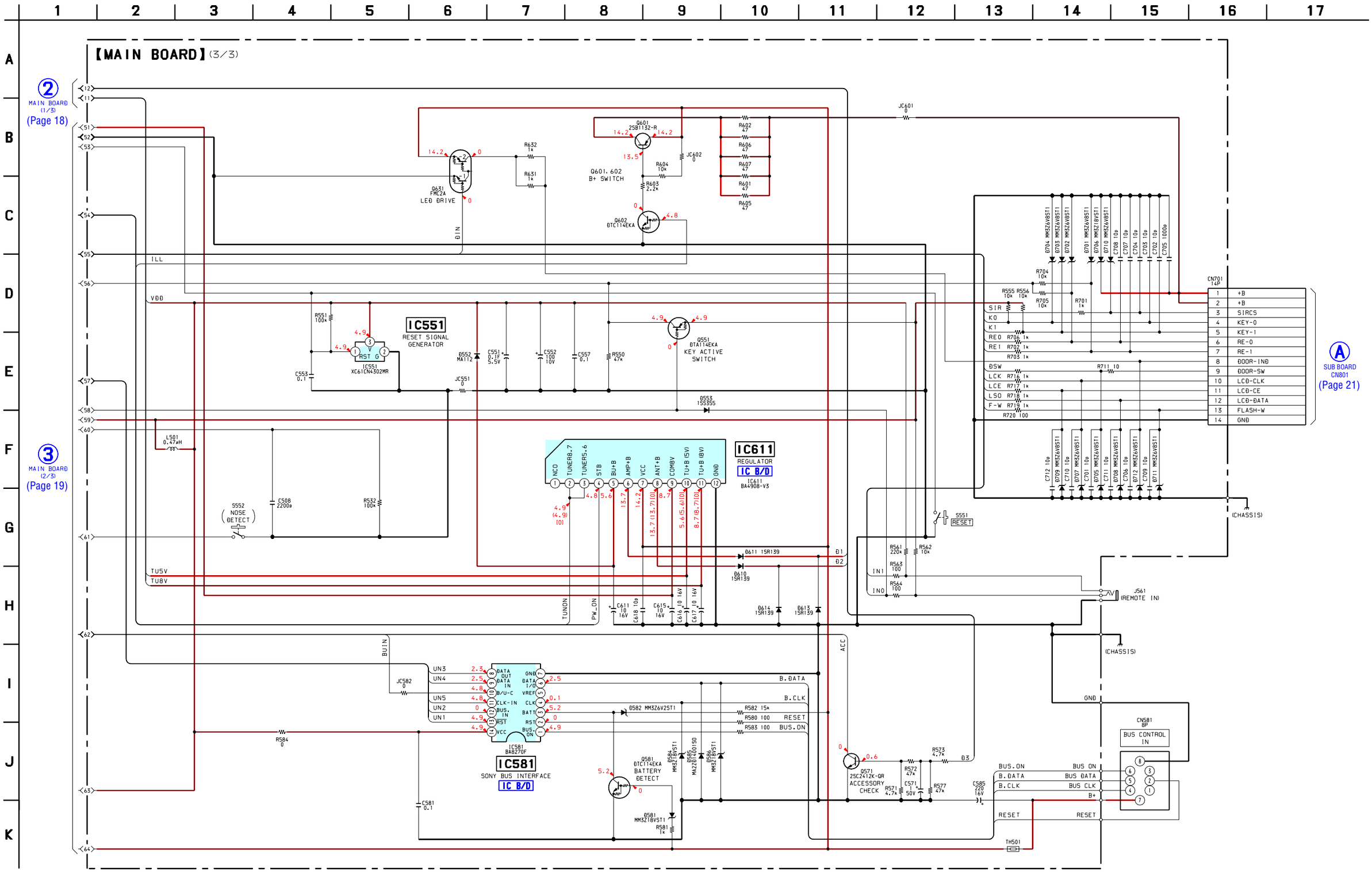
6-3. SCHEMATIC DIAGRAM – MAIN Board (1/3) – • See page 24 for IC Block Diagram.



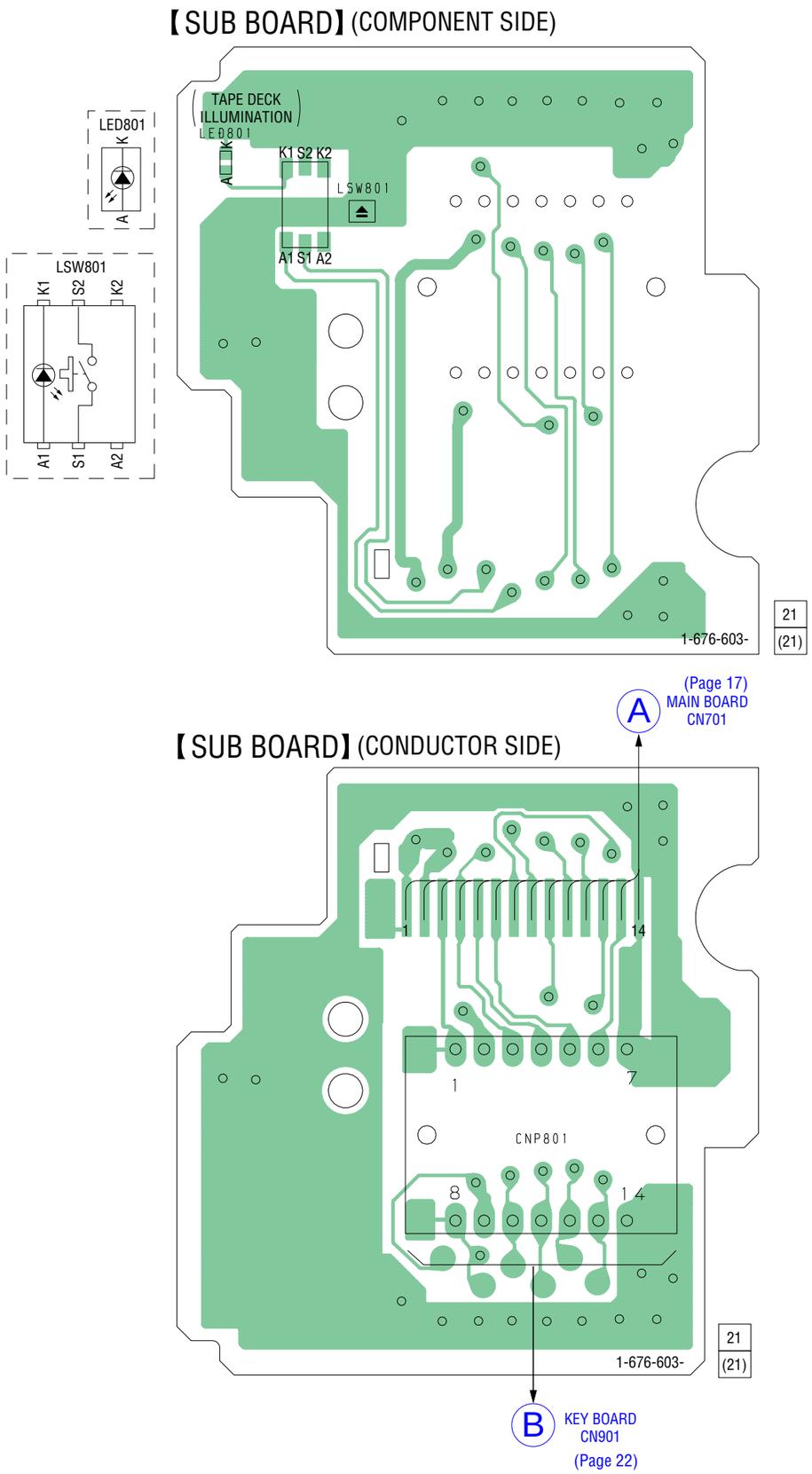
6-4. SCHEMATIC DIAGRAM – MAIN Board (2/3) – • See page 16 for Waveforms. • See page 24 for IC Block Diagrams.



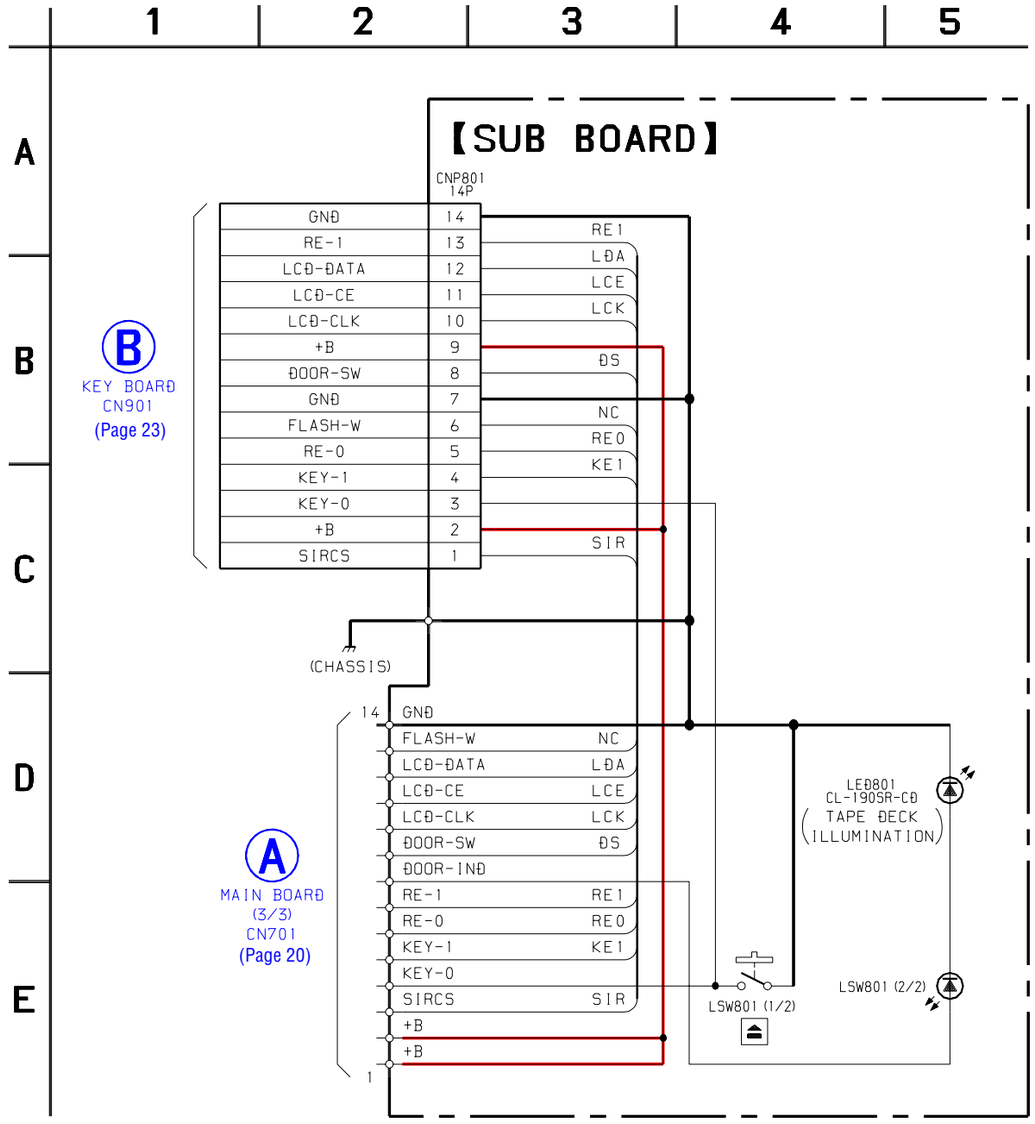
6-5. SCHEMATIC DIAGRAM – MAIN Board (3/3) – • See page 24 for IC Block Diagrams.



6-6. PRINTED WIRING BOARD – SUB Board –



6-7. SCHEMATIC DIAGRAM – SUB Board –

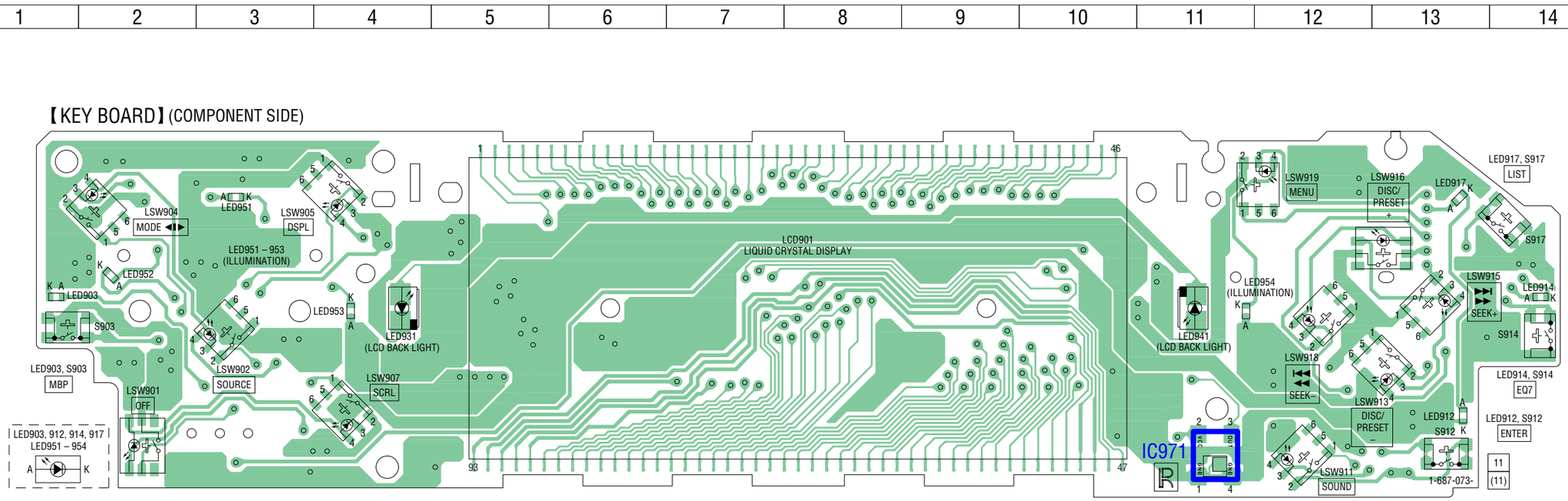


6-8. PRINTED WIRING BOARD – KEY Board –

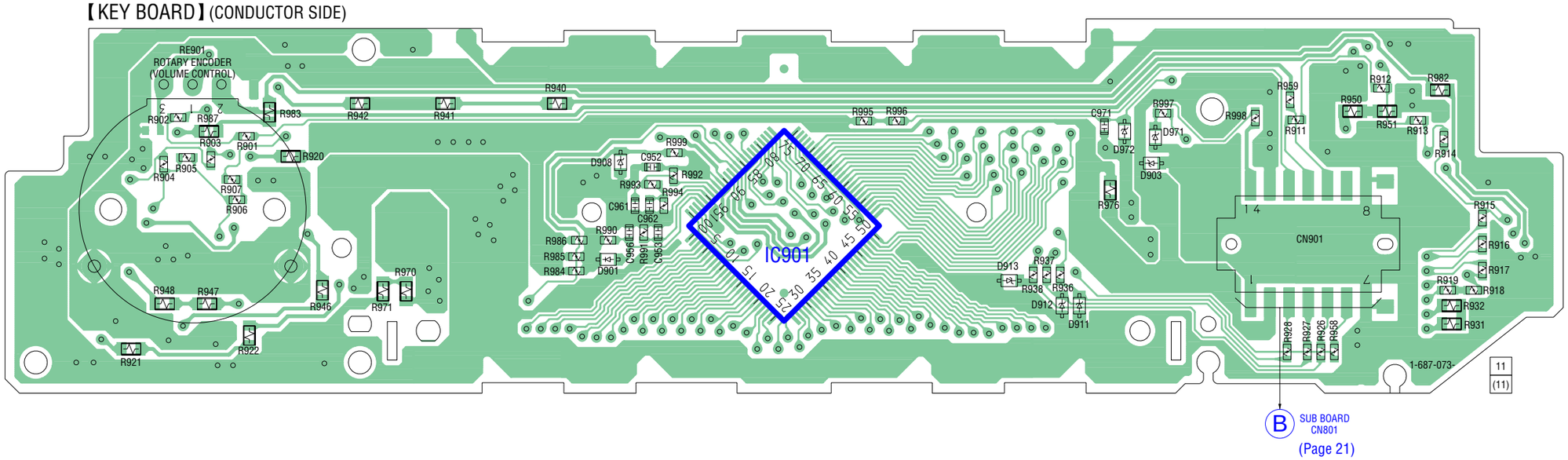
- **Semiconductor Location**

Ref. No.	Location
D901	G-6
D903	F-11
D908	F-6
D911	G-10
D912	G-10
D913	G-9
D971	F-11
D972	F-10
IC901	G-8
IC971	D-11
LED903	C-1
LED912	D-13
LED914	C-14
LED917	B-13
LED931	C-4
LED941	C-11
LED951	B-3
LED952	C-2
LED953	C-4
LED954	C-11

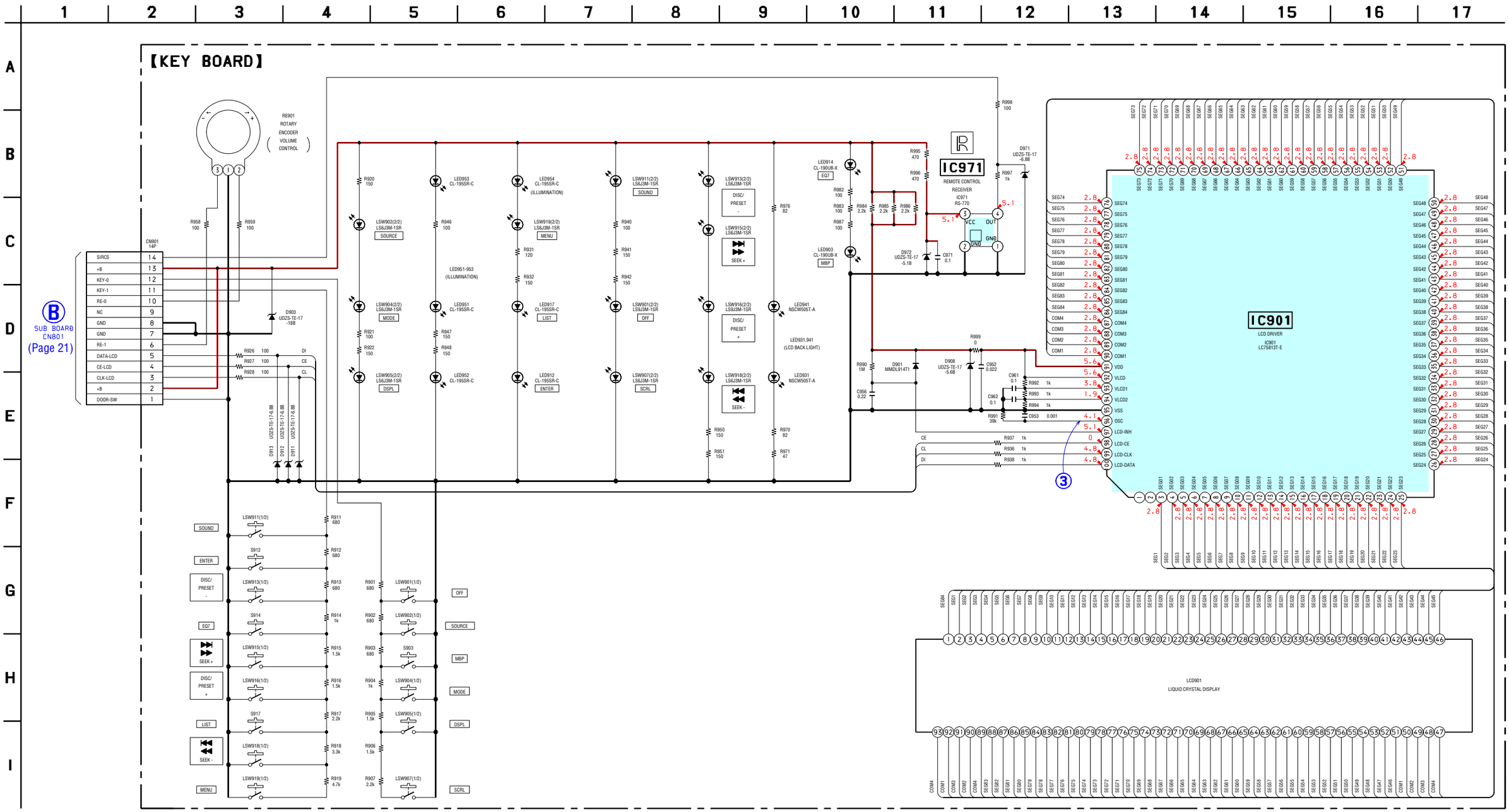
【KEY BOARD】(COMPONENT SIDE)



【KEY BOARD】(CONDUCTOR SIDE)



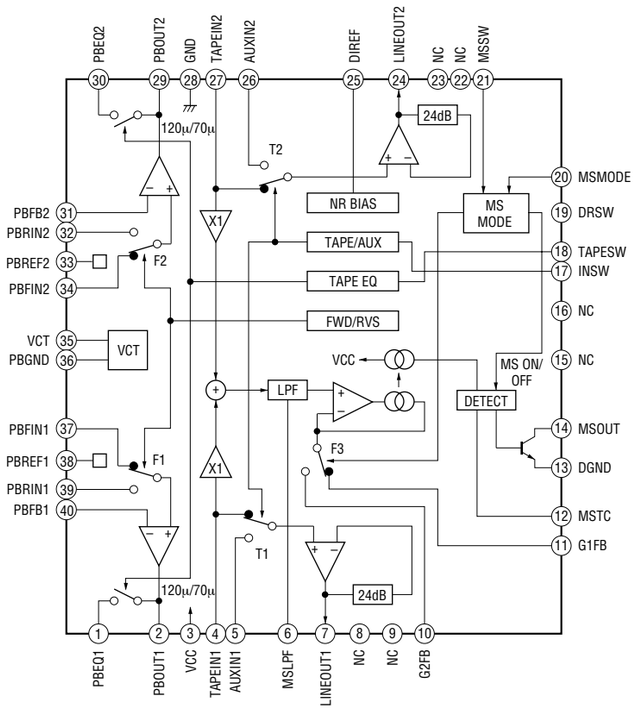
6-9. SCHEMATIC DIAGRAM – KEY Board – • See page 16 for Waveform.



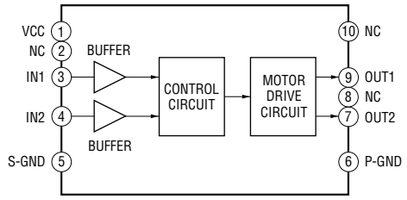
- **IC Block Diagrams**

– MAIN Board –

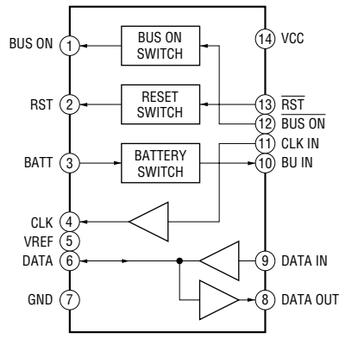
IC301 CXA2509AQ-T4



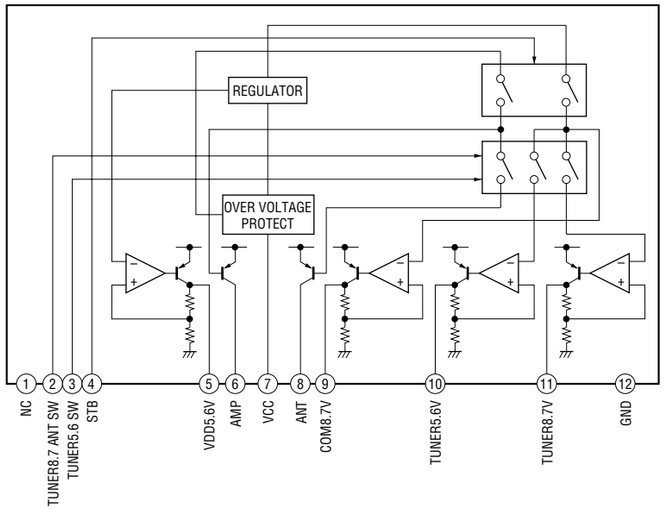
IC351 LB1930M-TLM



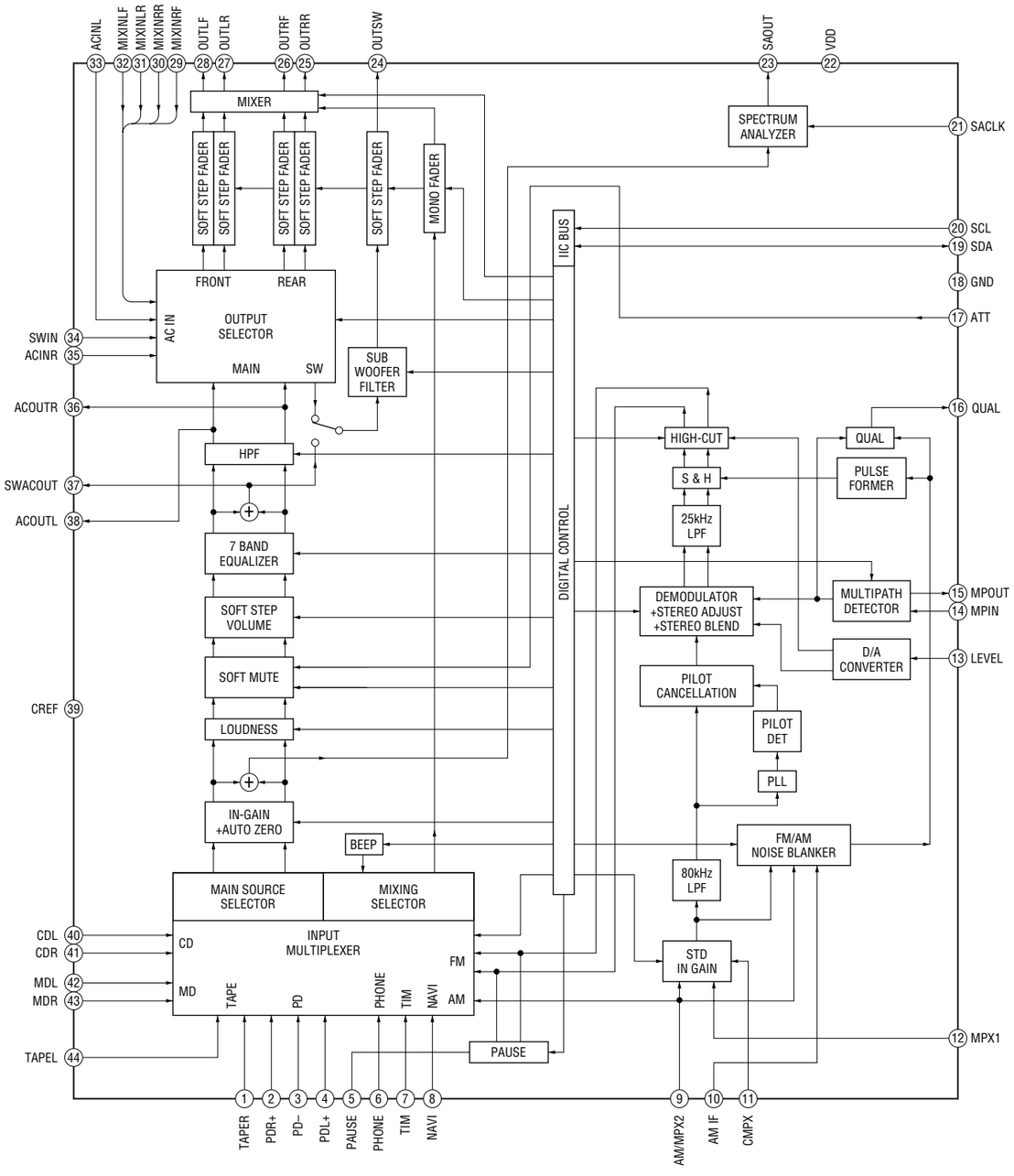
IC581 BA8270F-E2



IC611 BA4908-V3



IC331 TDA7406



6-10. IC PIN FUNCTION DESCRIPTION

• MAIN BOARD IC501 MN101C49KSC1 (SYSTEM CONTROLLER)

Pin No.	Pin Name	I/O	Description
1	VREF–	I	Reference voltage (0V) input terminal (for A/D converter)
2	VSM	I	FM and AM signal meter voltage detection signal input from the tuner unit (A/D input)
3	NIL	I	Not used
4, 5	KEYIN1, KEYIN0	I	Key input terminal (A/D input)
6	RCIN0	I	Rotary remote commander key input terminal (A/D input)
7, 8	NIL	I	Not used
9	DSTSEL	I	Destination setting terminal Fixed at center voltage in this set
10	VREF+	I	Reference voltage (+5V) input terminal (for A/D converter)
11	VDD	—	Power supply terminal (+5V)
12	OSCOUT	O	Main system clock output terminal (18.432 MHz)
13	OSCIN	I	Main system clock input terminal (18.432 MHz)
14	VSS	—	Ground terminal
15	XI	I	Sub system clock input terminal (32.768 kHz)
16	XOUT	O	Sub system clock output terminal (32.768 kHz)
17	MMOD	I	Selection signal of memory mode input terminal "L": single chip mode (fixed at "L" in this set)
18	LCDSO	O	Serial data output to the liquid crystal display driver
19	LCDCE	O	Chip enable signal output to the liquid crystal display driver "H" active
20	LCDCKO	O	Serial data transfer clock signal output to the liquid crystal display driver
21 to 23	NCO	O	Not used
24	$\overline{\text{SYSRST}}$	O	Reset signal output to the SONY bus interface "L": reset
25	$\overline{\text{BUSON}}$	O	Bus on/off control signal output to the SONY bus interface "L": bus on
26	KEYACK	I	Input of acknowledge signal for the key entry Acknowledge signal is input to accept function and eject keys in the power off status On at input of "H"
27	NIL	I	Not used
28	BUIN	I	Battery detection signal input from the SONY bus interface "L" is input at low voltage
29	SIRCS	I	SIRCS remote control signal input from the remote control receiver
30, 31	NIL	I	Not used
32	VDD2	—	Power supply terminal (+5V)
33	$\overline{\text{RESET}}$	I	System reset signal input from the reset signal generator and reset switch "L": reset "L" is input for several 100 msec after power on, then it changes to "H"
34	TUNON	O	Tuner system power supply on/off control signal output "H": tuner power on
35	BEEP	O	Beep sound drive signal output to the power amplifier
36	PW_ON	O	Main system power supply on/off control signal output "H": power on
37	NCO	I	Not used
38	$\overline{\text{ACCIN}}$	I	Accessory detection signal input "L": accessory on
39	NCO	O	Not used
40	TELATT	I	Telephone attenuate signal input terminal At input of "H", the signal is attenuated by –20 dB Not used
41	VPP	I	Not used
42	BUSSO	O	Serial data output to the SONY bus interface
43	BUSSI	I	Serial data input from the SONY bus interface
44	BUSCKO	O	Serial data transfer clock signal output to the SONY bus interface

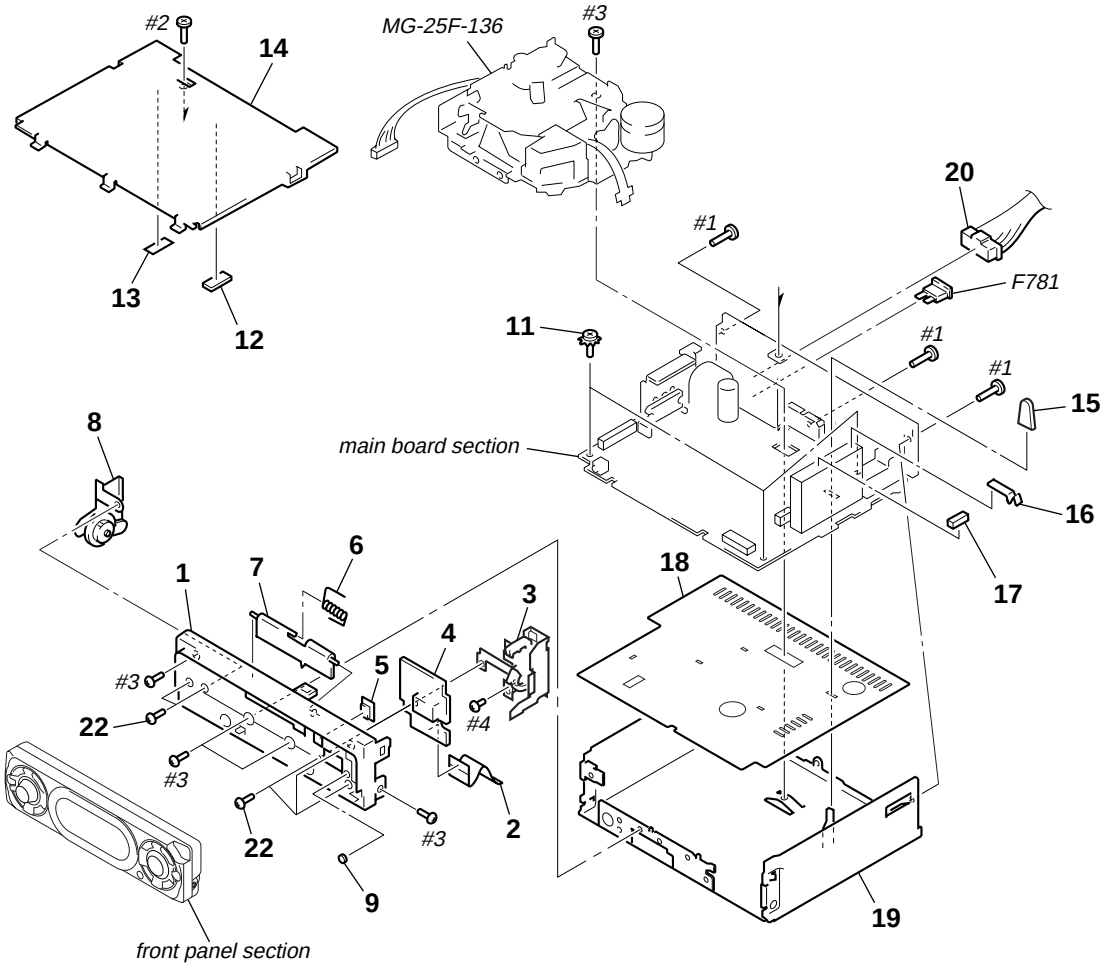
Pin No.	Pin Name	I/O	Description
45	IIC SIO	I/O	Two-way data IIC bus with the tuner unit and electrical volume
46	NCO	O	Not used
47	IIC CKO	O	IIC bus clock signal output to the tuner unit and electrical volume
48	AMPON	O	Standby on/off control signal output to the power amplifier "L": standby mode, "H": amplifier on
49	$\overline{\text{AMPATT}}$	O	Muting on/off control signal output to the power amplifier "L": muting on
50	ATT	O	Audio line muting on/off control signal output "H": muting on
51	NCO	O	Not used
52	$\overline{\text{AMSON}}$	O	Tape auto music sensor control signal output to the tape equalizer amplifier "L": auto music sensor on
53	F/ROUT	O	Forward/reverse control signal output to the tape equalizer amplifier "L": reverse direction, "H": forward direction
54	MTLON	O	METAL control in/out terminal At initial mode: valid/invalid selection input of METAL function (valid at "L" input) At normal mode: METAL on/off control signal output to the tape equalizer amplifier (METAL on at "H" output)
55	TAPATT	O	Tape muting on/off control signal output to the tape equalizer amplifier "H": muting on Active at ATA, FF/REW mode
56	DOLON	I/O	Dolby control in/out terminal Not used
57	$\overline{\text{AMSIN}}$	I	Whether a music is present or not from tape equalizer amplifier is detected at auto music sensor "L": music is present, "H": music is not present
58	4VPRE	I	4V PREOUT setting terminal "L": 4V PREOUT on Fixed at "H" in this set
59	$\overline{\text{VOLATT}}$	O	Pre amplifier muting on/off control signal output to the electrical volume "L": muting on
60 to 64	NCO	O	Not used
65	FLASH W	I	Internal flash memory data write mode detection signal input terminal "L": data write mode Not used
66	$\overline{\text{TESTIN}}$	I	Setting terminal for the test mode "L": test mode, normally fixed at "H"
67	RCIN1	I	Rotary remote commander shift key input "L": shift key on
68 to 73	NCO	O	Not used
74	EEP SIO	I/O	Two-way data bus for tuner EEPROM with the tuner unit
75	EEP CKO	I/O	Two-way bus clock signal for tuner EEPROM with the tuner unit
76	COLSEL	I	Setting terminal for the illumination color "L": red Fixed at "L" in this set
77	SWSHIFT	O	VCO shift control signal output to the tuner unit for SW "L": EXCEPT SW, "H": SW
78	$\overline{\text{DOORSW}}$	I	Front panel open/close detection signal input "L" is input when the front panel is closed
79	DOORIND	O	LED drive signal output of the MD disc slot illumination and ⏏ indicator "H": LED on "H" is output to turn on the LED when front panel is opened
80, 81	REIN1, REIN0	I	Dial pulse input of the rotary encoder (for VOLUME control)
82	$\overline{\text{A/D ON}}$	O	A/D converter power control signal output When the KEYACK (pin ㉖) that controls reference voltage power for key A/D conversion input is active, "L" is output from this terminal to enable the input
83	ILLON	O	Power on/off control signal output of the illumination LED and liquid crystal display driver "H": power on
84	REL	I	Rotation detection signal input from supply reel sensor and take-up reel sensor on the mechanism deck

Pin No.	Pin Name	I/O	Description
85	POS3	I	Tape position (EJECT/FF/REW/REV/ FWD mode) detect input from the tape operation switch on the deck mechanism POS3: "L": REV and EJECT mode, "H": others mode POS2: "L": REW mode, "H": others mode POS0: "L": EJECT mode, "H": others mode POS1: "L": PLAY and FF in FWD mode, and REW in REV mode, "H": others mode
86	POS2	I	
87	POS0	I	
88	POS1	I	
89	LMLOD	O	Motor drive signal output to the loading motor drive "H" active (For the loading direction and forward side operation)
90	LMEJ	O	Motor drive signal output to the loading motor drive "H" active (For the eject direction and reverse side operation)
91	TAPEON	O	Power on/off control signal output of the loading motor drive and capstan/reel motor "H": motor on
92	CMON	O	Capstan/reel motor drive signal output terminal "H": motor on
93	$\overline{\text{NOSESW}}$	I	Front panel block remove/attach detection signal input from the nose detection switch "L": front panel is attached, "H": front panel is removed
94	NCO	O	Not used
95	DAVSS	—	Ground terminal (for D/A converter)
96 to 99	NCO	O	Not used
100	DAVDD	—	Power supply terminal (+5V) (for D/A converter)

SECTION 7
EXPLODED VIEWS

NOTE:
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- Color Indication of Appearance Parts
  Example:
  KNOB, BALANCE (WHITE) . . . (RED)
  ↑ ↑
  Parts Color Cabinet's Color
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Accessories are given in the last of the electrical parts list.

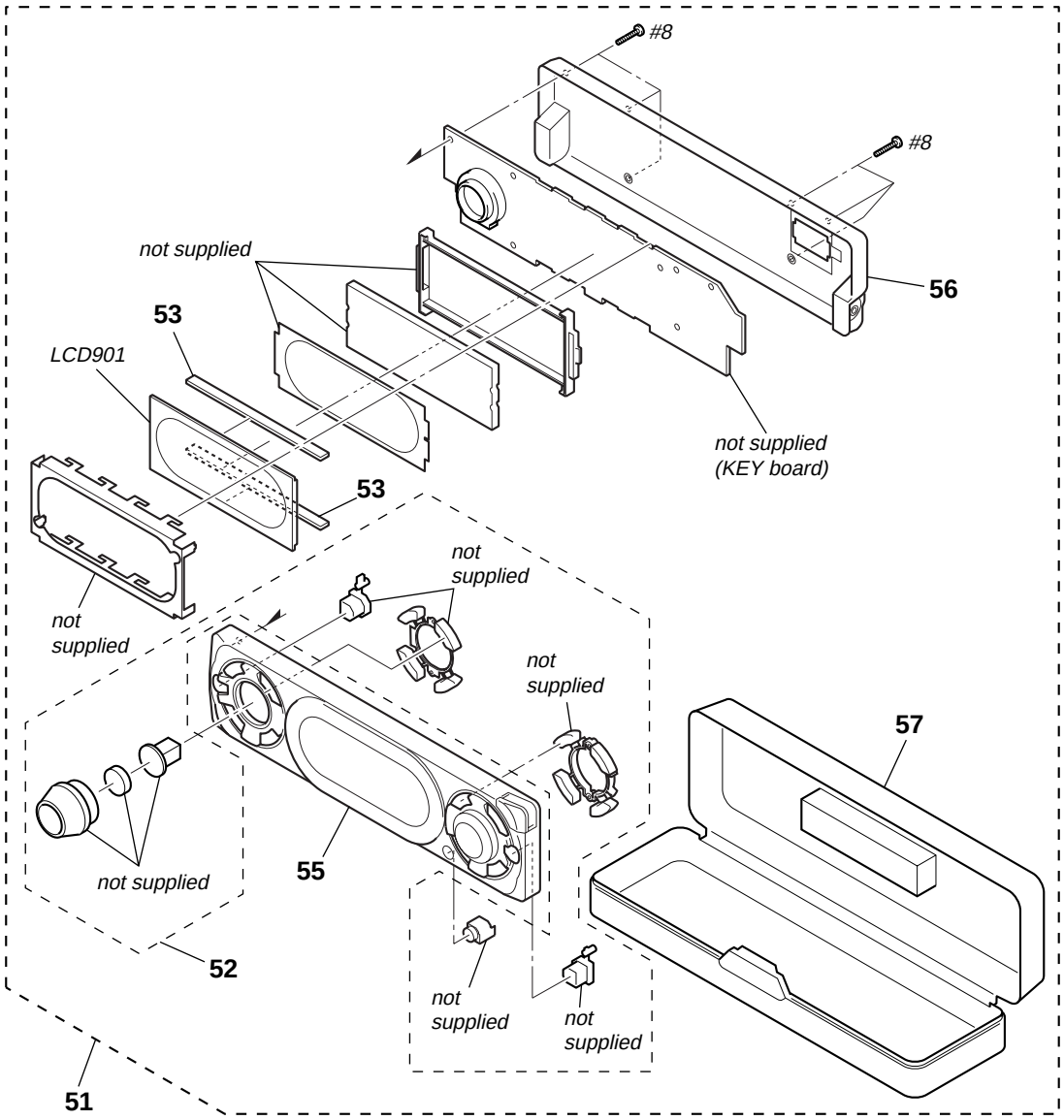
7-1. CHASSIS SECTION



Ref. No.	Part No.	Description	Remark
1	X-3381-588-2	PANEL ASSY, SUB	
2	1-792-195-11	CABLE, FLEXIBLE FLAT (14CORE)	
3	X-3381-381-3	LOCK ASSY	
* 4	1-676-603-21	SUB BOARD	
5	3-040-990-01	BUTTON (EJECT) (⏏)	
6	3-935-003-01	SPRING, TORSION	
7	3-027-437-12	DOOR, CASSETTE	
8	X-3376-699-6	GEAR ASSY	
9	3-243-177-01	CUSHION (SUB PANEL)	
11	3-376-464-11	SCREW (+PTT 2.6X6), GROUND POINT	
* 12	3-046-991-01	SPACER (COVER R)	
* 13	3-046-990-01	SPACER (COVER L)	
14	3-040-995-21	COVER	

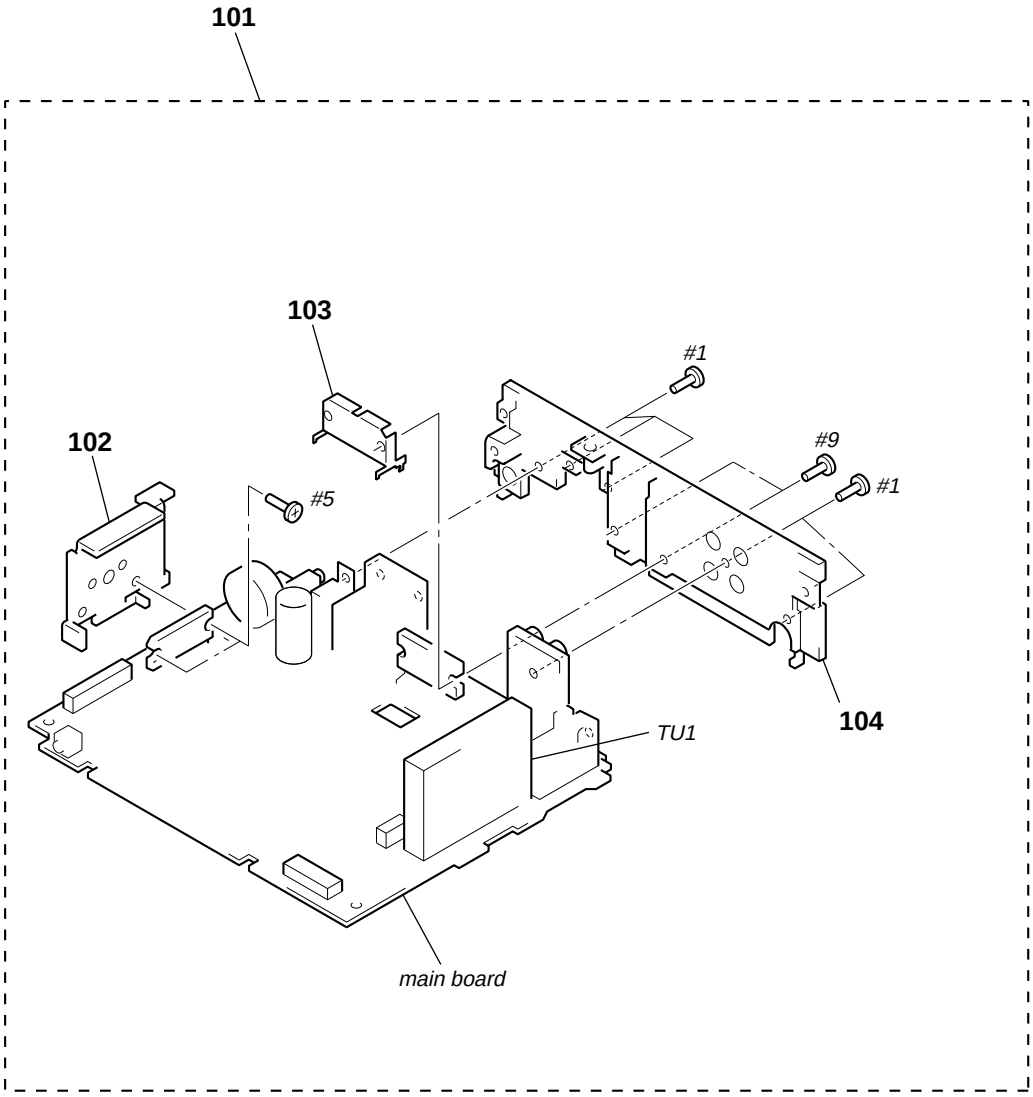
Ref. No.	Part No.	Description	Remark
15	3-012-859-21	CAP (25), RUBBER	
* 16	3-045-878-01	PLATE (TU), GROUND	
* 17	3-045-877-02	CUSHION (TU)	
18	3-244-934-01	INSULATED PLATE	
19	3-040-994-31	CHASSIS	
20	1-776-206-21	CORD (WITH CONNECTOR) (POWER)	
22	3-042-244-01	SCREW (T)	
F781	1-532-877-11	FUSE (BLADE TYPE) (AUTO FUSE) (10A/32V)	
#1	7-685-793-09	SCREW +PTT 2.6X8 (S)	
#2	7-685-791-09	SCREW +PTT 2.6X5 (S)	
#3	7-685-792-09	SCREW +PTT 2.6X6 (S)	
#4	7-627-553-28	SCREW, PRECISION +P 2X2.5	

7-2. FRONT PANEL SECTION



Ref. No.	Part No.	Description	Remark
51	A-3220-903-A	FP-XR-CA650X (FRONT PANEL ASSY)	
52	X-3382-888-1	BUTTON KIT (SVX) ASSY	
53	1-694-882-11	CONDUCTIVE BOARD, CONNECTION	
55	X-3382-800-1	PANEL (SV) ASSY, FRONT	
56	X-3382-890-1	PANEL (SVX) ASSY, FRONT BACK	
57	X-3378-490-2	CASE (PANEL) ASSY	
LCD901	1-804-621-12	DISPLAY PANEL, LIQUID CRYSTAL	
#8	7-685-106-19	SCREW +P 2X10 TYPE2 NON-SLIT	

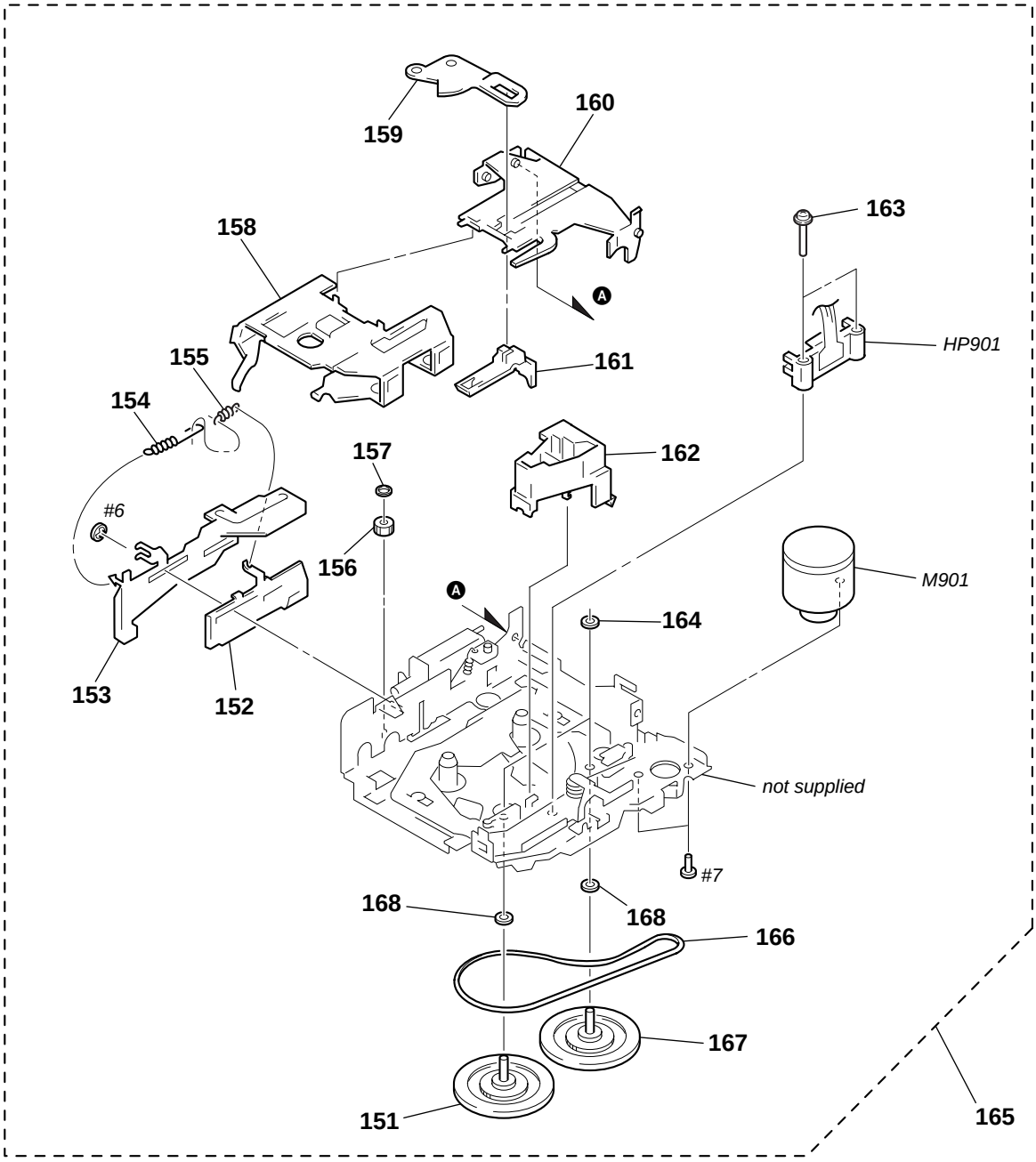
7-3. MAIN BOARD SECTION



Ref. No.	Part No.	Description	Remark
101	A-3340-340-A	MAIN BOARD, COMPLETE	
* 102	3-041-262-01	HEAT SINK (REG/XR)	
* 103	3-040-998-01	BRACKET (IC)	
* 104	3-040-996-12	HEAT SINK (2P)	

Ref. No.	Part No.	Description	Remark
TU1	A-3220-812-A	TUNER UNIT (TUX-020)	
#1	7-685-793-09	SCREW +PTT 2.6X8 (S)	
#5	7-685-647-79	SCREW +BVTP 3X10 TYPE2 IT-3	
#9	7-685-795-09	SCREW +PTT 2.6X12 (S)	

7-4. MECHANISM DECK SECTION (MG-25F-136)



Ref. No.	Part No.	Description	Remark
151	A-3291-667-A	CLUTCH (FR) ASSY	
* 152	3-019-130-01	LEVER (LDG-A)	
* 153	3-019-131-05	LEVER (LDG-B)	
154	3-228-690-01	SPRING (LD-1), TENSION	
155	3-020-540-01	SPRING (LD-2), TENSION	
156	3-020-542-01	GEAR (LOADING FT)	
157	3-341-753-11	WASHER, POLYETHYLENE	
158	3-020-533-01	HOUSING	
* 159	3-020-532-02	ARM (SUCTION)	
160	3-020-534-01	HANGER	
161	3-933-346-01	CATCHER	

Ref. No.	Part No.	Description	Remark
162	3-933-344-22	GUIDE (C)	
163	3-927-100-21	SCREW (+PS 2X10), SPECIAL	
164	3-364-151-01	WASHER	
165	A-3220-610-A	MECHANISM DECK ASSY	
166	3-017-302-01	BELT (25)	
167	3-026-636-01	FLYWHEEL (F)	
168	3-701-437-21	WASHER	
HP901	1-500-157-21	HEAD, MAGNETIC (PLAYBACK)	
M901	A-3291-665-A	MOTOR ASSY, MAIN (CAPSTAN/REEL)	
#6	7-624-104-04	STOP RING 2.0, TYPE-E	
#7	7-627-553-17	SCREW, PRECISION +P 2X2	

SECTION 8
ELECTRICAL PARTS LIST

KEY

NOTE:
- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
  All resistors are in ohms.
  METAL: Metal-film resistor.
  METAL OXIDE: Metal oxide-film resistor.
  F: nonflammable
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
  In each case, u: µ, for example:
  uA. . : µA. . uPA. . : µPA. .
  uPB. . : µPB. . uPC. . : µPC. .
  uPD. . : µPD. .
- CAPACITORS
  uF: µF
- COILS
  uH: µH

When indicating parts by reference number, please include the board.

Ref. No.	Part No.	Description			Remark
		KEY BOARD			
		**********			
	1-694-882-11	CONDUCTIVE BOARD, CONNECTION			
		< CAPACITOR >			
C952	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V
C953	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C956	1-115-467-11	CERAMIC CHIP	0.22uF	10%	10V
C961	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C962	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C971	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
		< CONNECTOR >			
CN901	1-794-065-22	PLUG, CONNECTOR 14P			
		< DIODE >			
D901	8-719-081-97	DIODE MMDL914T1			
D903	8-719-083-66	DIODE UDZSTE-1718B			
D908	8-719-069-55	DIODE UDZSTE-175.6B			
D911	8-719-978-33	DIODE DTZ-TT11-6.8B			
D912	8-719-978-33	DIODE DTZ-TT11-6.8B			
D913	8-719-978-33	DIODE DTZ-TT11-6.8B			
D971	8-719-978-33	DIODE DTZ-TT11-6.8B			
D972	8-719-069-54	DIODE UDZSTE-175.1B			
		< IC >			
IC901	6-701-640-01	IC LC75813T-E			
IC971	6-600-163-01	IC RS-770			
		< LIQUID CRYSTAL DISPLAY >			
LCD901	1-804-621-12	DISPLAY PANEL, LIQUID CRYSTAL			
		< LED >			
LED903	8-719-080-04	LED CL-190UB-X-T (MBP)			
LED912	6-500-450-01	LED CL-195SR-CD-T (ENTER)			
LED914	8-719-080-04	LED CL-190UB-X-T (EQ7)			
LED917	6-500-450-01	LED CL-195SR-CD-T (LIST)			
LED931	6-500-459-01	LED NSCW505T-ARS (LCD BACK LIGHT)			
LED941	6-500-459-01	LED NSCW505T-ARS (LCD BACK LIGHT)			
LED951	6-500-450-01	LED CL-195SR-CD-T (ILLUMINATION)			
LED952	6-500-450-01	LED CL-195SR-CD-T (ILLUMINATION)			
LED953	6-500-450-01	LED CL-195SR-CD-T (ILLUMINATION)			
LED954	6-500-450-01	LED CL-195SR-CD-T (ILLUMINATION)			
		< SWITCH >			
LSW901	1-771-883-11	SWITCH, TACTILE (WITH LED) (OFF)			
LSW902	1-771-476-11	SWITCH, KEY BOARD (WITH LED) (SOURCE)			
LSW904	1-771-476-11	SWITCH, KEY BOARD (WITH LED) (MODE ◀I▶)			
LSW905	1-771-476-11	SWITCH, KEY BOARD (WITH LED) (DSPL)			
LSW907	1-771-476-11	SWITCH, KEY BOARD (WITH LED) (SCRL)			
LSW911	1-771-476-11	SWITCH, KEY BOARD (WITH LED) (SOUND)			
LSW913	1-771-476-11	SWITCH, KEY BOARD (WITH LED) (DISC/PRESET -)			
LSW915	1-771-476-11	SWITCH, KEY BOARD(WITHLED) (▶▶I ▶▶ SEEK +)			
LSW916	1-771-883-11	SWITCH, TACTILE (WITH LED) (DISC/PRESET +)			
LSW918	1-771-476-11	SWITCH, KEY BOARD (WITH LED) (I◀◀ ◀◀ SEEK -)			
LSW919	1-771-476-11	SWITCH, KEY BOARD (WITH LED) (MENU)			
		< RESISTOR >			
R901	1-216-819-11	METAL CHIP	680	5%	1/10W
R902	1-216-819-11	METAL CHIP	680	5%	1/10W
R903	1-216-819-11	METAL CHIP	680	5%	1/10W
R904	1-216-821-11	METAL CHIP	1K	5%	1/10W
R905	1-216-823-11	METAL CHIP	1.5K	5%	1/10W
R906	1-216-823-11	METAL CHIP	1.5K	5%	1/10W
R907	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R911	1-216-819-11	METAL CHIP	680	5%	1/10W
R912	1-216-819-11	METAL CHIP	680	5%	1/10W
R913	1-216-819-11	METAL CHIP	680	5%	1/10W
R914	1-216-821-11	METAL CHIP	1K	5%	1/10W
R915	1-216-823-11	METAL CHIP	1.5K	5%	1/10W
R916	1-216-823-11	METAL CHIP	1.5K	5%	1/10W
R917	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R918	1-216-827-11	METAL CHIP	3.3K	5%	1/10W
R919	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R920	1-216-029-00	METAL CHIP	150	5%	1/10W
R921	1-216-025-11	RES-CHIP	100	5%	1/10W
R922	1-216-029-00	METAL CHIP	150	5%	1/10W
R926	1-216-809-11	METAL CHIP	100	5%	1/10W
R927	1-216-809-11	METAL CHIP	100	5%	1/10W
R928	1-216-809-11	METAL CHIP	100	5%	1/10W
R931	1-216-027-00	METAL CHIP	120	5%	1/10W

KEY **MAIN**

Ref. No.	Part No.	Description			Remark
R932	1-216-029-00	METAL CHIP	150	5%	1/10W
R936	1-216-821-11	METAL CHIP	1K	5%	1/10W
R937	1-216-821-11	METAL CHIP	1K	5%	1/10W
R938	1-216-821-11	METAL CHIP	1K	5%	1/10W
R940	1-216-025-11	RES-CHIP	100	5%	1/10W
R941	1-216-029-00	METAL CHIP	150	5%	1/10W
R942	1-216-029-00	METAL CHIP	150	5%	1/10W
R946	1-216-025-11	RES-CHIP	100	5%	1/10W
R947	1-216-029-00	METAL CHIP	150	5%	1/10W
R948	1-216-029-00	METAL CHIP	150	5%	1/10W
R950	1-216-029-00	METAL CHIP	150	5%	1/10W
R951	1-216-029-00	METAL CHIP	150	5%	1/10W
R958	1-216-809-11	METAL CHIP	100	5%	1/10W
R959	1-216-809-11	METAL CHIP	100	5%	1/10W
R970	1-216-023-00	METAL CHIP	82	5%	1/10W
R971	1-216-017-00	RES-CHIP	47	5%	1/10W
R976	1-216-023-00	METAL CHIP	82	5%	1/10W
R982	1-216-025-11	RES-CHIP	100	5%	1/10W
R983	1-216-025-11	RES-CHIP	100	5%	1/10W
R984	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R985	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R986	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R987	1-216-025-11	RES-CHIP	100	5%	1/10W
R990	1-216-857-11	METAL CHIP	1M	5%	1/10W
R991	1-216-840-11	METAL CHIP	39K	5%	1/10W
R992	1-216-821-11	METAL CHIP	1K	5%	1/10W
R993	1-216-821-11	METAL CHIP	1K	5%	1/10W
R994	1-216-821-11	METAL CHIP	1K	5%	1/10W
R995	1-216-817-11	METAL CHIP	470	5%	1/10W
R996	1-216-817-11	METAL CHIP	470	5%	1/10W
R997	1-216-821-11	METAL CHIP	1K	5%	1/10W
R998	1-216-809-11	METAL CHIP	100	5%	1/10W
R999	1-216-864-11	SHORT CHIP	0		
		< ROTARY ENCODER >			
RE901	1-477-144-12	ENCODER, ROTARY (VOLUME CONTROL)			
		< SWITCH >			
S903	1-771-884-11	SWITCH, TACTILE (MBP)			
S912	1-771-884-11	SWITCH, TACTILE (ENTER)			
S914	1-771-884-11	SWITCH, TACTILE (EQ7)			
S917	1-771-884-11	SWITCH, TACTILE (LIST)			
**********					
	A-3340-340-A	MAIN BOARD			
		**********			
*	3-040-996-12	HEAT SINK (2P)			
*	3-040-998-01	BRACKET (IC)			
*	3-041-262-01	HEAT SINK (REG/XR)			
	7-685-647-79	SCREW +BVTP 3X10 TYPE2 N-S			
	7-685-793-09	SCREW +PTT 2.6X8 (S)			
	7-685-795-09	SCREW +PTT 2.6X12 (S)			
		< CAPACITOR >			
C1	1-162-918-11	CERAMIC CHIP	18PF	5%	50V
C2	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C3	1-126-947-11	ELECT	47uF	20%	16V

Ref. No.	Part No.	Description			Remark
C5	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C6	1-124-589-11	ELECT	47uF	20%	16V
C13	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C21	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C22	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
C23	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V
C24	1-165-176-11	CERAMIC CHIP	0.047uF	10%	16V
C41	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C101	1-162-959-11	CERAMIC CHIP	330PF	5%	50V
C102	1-162-959-11	CERAMIC CHIP	330PF	5%	50V
C103	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C104	1-115-467-11	CERAMIC CHIP	0.22uF	10%	10V
C105	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C106	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C108	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C110	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C112	1-164-816-11	CERAMIC CHIP	220PF	2%	50V
C114	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C115	1-164-816-11	CERAMIC CHIP	220PF	2%	50V
C116	1-164-816-11	CERAMIC CHIP	220PF	2%	50V
C141	1-126-160-11	ELECT	1uF	20%	50V
C142	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C174	1-124-233-11	ELECT	10uF	20%	16V
C176	1-125-891-11	CERAMIC CHIP	0.47uF	10%	10V
C177	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C184	1-124-233-11	ELECT	10uF	20%	16V
C185	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C186	1-125-891-11	CERAMIC CHIP	0.47uF	10%	10V
C187	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C201	1-162-959-11	CERAMIC CHIP	330PF	5%	50V
C202	1-162-959-11	CERAMIC CHIP	330PF	5%	50V
C203	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C204	1-115-467-11	CERAMIC CHIP	0.22uF	10%	10V
C205	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C206	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C208	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C210	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C212	1-164-816-11	CERAMIC CHIP	220PF	2%	50V
C214	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C215	1-164-816-11	CERAMIC CHIP	220PF	2%	50V
C216	1-164-816-11	CERAMIC CHIP	220PF	2%	50V
C241	1-126-160-11	ELECT	1uF	20%	50V
C242	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C274	1-124-233-11	ELECT	10uF	20%	16V
C276	1-125-891-11	CERAMIC CHIP	0.47uF	10%	10V
C277	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C284	1-124-233-11	ELECT	10uF	20%	16V
C285	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C286	1-125-891-11	CERAMIC CHIP	0.47uF	10%	10V
C287	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C301	1-124-234-00	ELECT	22uF	20%	16V
C302	1-131-651-21	TANTALUM CHIP	10uF	20%	16V
C303	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C304	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C305	1-125-891-11	CERAMIC CHIP	0.47uF	10%	10V
C306	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C307	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V

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Ref. No.	Part No.	Description			Remark
C332	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
C333	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C335	1-124-233-11	ELECT	10uF	20%	16V
C336	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C337	1-124-589-11	ELECT	47uF	20%	16V
C340	1-125-891-11	CERAMIC CHIP	0.47uF	10%	10V
C351	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C352	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C353	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C354	1-124-233-11	ELECT	10uF	20%	16V
C355	1-124-234-00	ELECT	22uF	20%	16V
C356	1-126-934-11	ELECT	220uF	20%	16V
C357	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C358	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C501	1-124-589-11	ELECT	47uF	20%	16V
C502	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C503	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C504	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C505	1-162-918-11	CERAMIC CHIP	18PF	5%	50V
C506	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C508	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
C509	1-165-176-11	CERAMIC CHIP	0.047uF	10%	16V
C511	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C512	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C551	1-125-710-11	DOUBLE LAYER	0.1F		5.5V
C552	1-104-665-11	ELECT	100uF	20%	10V
C553	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C557	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C571	1-126-160-11	ELECT	1uF	20%	50V
C581	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C585	1-126-934-11	ELECT	220uF	20%	16V
C611	1-126-157-11	ELECT	10uF	20%	16V
C615	1-126-157-11	ELECT	10uF	20%	16V
C616	1-126-157-11	ELECT	10uF	20%	16V
C617	1-126-157-11	ELECT	10uF	20%	16V
C618	1-163-227-11	CERAMIC CHIP	10PF	0.5PF	50V
C622	1-124-589-11	ELECT	47uF	20%	16V
C701	1-163-227-11	CERAMIC CHIP	10PF	0.5PF	50V
C702	1-163-227-11	CERAMIC CHIP	10PF	0.5PF	50V
C703	1-163-227-11	CERAMIC CHIP	10PF	0.5PF	50V
C704	1-163-227-11	CERAMIC CHIP	10PF	0.5PF	50V
C705	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C706	1-163-227-11	CERAMIC CHIP	10PF	0.5PF	50V
C707	1-163-227-11	CERAMIC CHIP	10PF	0.5PF	50V
C708	1-163-227-11	CERAMIC CHIP	10PF	0.5PF	50V
C709	1-163-227-11	CERAMIC CHIP	10PF	0.5PF	50V
C710	1-163-227-11	CERAMIC CHIP	10PF	0.5PF	50V
C711	1-163-227-11	CERAMIC CHIP	10PF	0.5PF	50V
C712	1-163-227-11	CERAMIC CHIP	10PF	0.5PF	50V
C751	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V
C752	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C754	1-124-233-11	ELECT	10uF	20%	16V
C755	1-124-233-11	ELECT	10uF	20%	16V
C781	1-107-885-31	ELECT	3300uF	20%	16V
C782	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C783	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V

Ref. No.	Part No.	Description	Remark
		< CONNECTOR >	
CN301	1-785-694-11	CONNECTOR, FFC/FPC 7P	
* CN351	1-506-995-11	PIN, CONNECTOR (PC BOARD) 13P	
CN581	1-580-907-31	PLUG, CONNECTOR	
CN701	1-784-456-11	CONNECTOR, FFC/FPC 14P	
CN781	1-774-701-11	PIN, CONNECTOR 16P	
		< JACK >	
CNJ151	1-774-699-12	JACK, PIN 4P (AUDIO OUT REAR, BUS AUDIO IN)	
		< DIODE >	
D1	8-719-056-65	DIODE 1SS372-TE85L	
D351	6-500-028-01	DIODE MM3Z9V1ST1	
D352	8-719-970-02	DIODE 1SR139-400T	
D501	8-719-988-61	DIODE 1SS355TE-17	
D502	8-719-056-83	DIODE UDZ-TE-17-6.8B	
D552	8-719-067-56	DIODE MA112-TX	
D553	8-719-988-61	DIODE 1SS355TE-17	
D581	8-719-056-93	DIODE UDZ-TE-17-18B	
D582	8-719-056-82	DIODE UDZ-TE-17-6.2B	
D584	8-719-056-93	DIODE UDZ-TE-17-18B	
D585	8-719-072-70	DIODE MA2ZD14001S0	
D586	8-719-056-93	DIODE UDZ-TE-17-18B	
D610	8-719-970-02	DIODE 1SR139-400T	
D611	8-719-970-02	DIODE 1SR139-400T	
D613	8-719-970-02	DIODE 1SR139-400T	
D614	8-719-970-02	DIODE 1SR139-400T	
D622	8-719-988-61	DIODE 1SS355TE-17	
D701	8-719-056-83	DIODE UDZ-TE-17-6.8B	
D702	8-719-056-83	DIODE UDZ-TE-17-6.8B	
D703	8-719-056-83	DIODE UDZ-TE-17-6.8B	
D704	8-719-056-83	DIODE UDZ-TE-17-6.8B	
D705	8-719-056-83	DIODE UDZ-TE-17-6.8B	
D706	8-719-056-93	DIODE UDZ-TE-17-18B	
D707	8-719-056-83	DIODE UDZ-TE-17-6.8B	
D708	8-719-056-83	DIODE UDZ-TE-17-6.8B	
D709	8-719-056-83	DIODE UDZ-TE-17-6.8B	
D710	8-719-056-83	DIODE UDZ-TE-17-6.8B	
D711	8-719-056-83	DIODE UDZ-TE-17-6.8B	
D712	8-719-056-83	DIODE UDZ-TE-17-6.8B	
D721	8-719-079-42	DIODE 1ZB22 (TPA3)	
D722	8-719-079-55	DIODE PTZ-TE25-22	
D723	8-719-079-42	DIODE 1ZB22 (TPA3)	
D724	8-719-079-55	DIODE PTZ-TE25-22	
D731	8-719-079-55	DIODE PTZ-TE25-22	
D732	8-719-079-55	DIODE PTZ-TE25-22	
D733	8-719-079-55	DIODE PTZ-TE25-22	
D734	8-719-079-42	DIODE 1ZB22 (TPA3)	
D781	8-719-049-38	DIODE 1N5404TU	
		< IC >	
IC301	8-752-079-78	IC CXA2509AQ-T4	
IC331	6-701-403-01	IC TDA7406	
IC351	8-759-527-33	IC LB1930M-TLM	
IC501	6-801-203-02	IC MN101C49KSC1	

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Ref. No.	Part No.	Description		Remark
IC551	8-759-682-69	IC XC61CN4302MR		
IC581	8-759-449-89	IC BA8270F-E2		
IC611	8-759-661-47	IC BA4908-V3		
IC751	8-759-827-14	IC TA8268AH		
		< JACK >		
J1	1-815-185-12	JACK (ANT) (FM/AM ANTENNA IN)		
J561	1-566-822-41	JACK (REMOTE IN)		
		< SHORT >		
JC296	1-216-295-00	SHORT CHIP	0	
JC297	1-216-296-11	SHORT CHIP	0	
JC299	1-216-295-00	SHORT CHIP	0	
JC301	1-216-295-00	SHORT CHIP	0	
JC302	1-216-295-00	SHORT CHIP	0	
JC303	1-216-295-00	SHORT CHIP	0	
JC304	1-216-295-00	SHORT CHIP	0	
JC332	1-216-296-11	SHORT CHIP	0	
JC333	1-216-296-11	SHORT CHIP	0	
JC502	1-216-295-00	SHORT CHIP	0	
JC503	1-216-295-00	SHORT CHIP	0	
JC504	1-216-296-11	SHORT CHIP	0	
JC509	1-216-295-00	SHORT CHIP	0	
JC551	1-216-295-00	SHORT CHIP	0	
JC582	1-216-295-00	SHORT CHIP	0	
JC601	1-216-295-00	SHORT CHIP	0	
JC602	1-216-296-11	SHORT CHIP	0	
JC621	1-216-295-00	SHORT CHIP	0	
JC751	1-216-296-11	SHORT CHIP	0	
JC752	1-216-296-11	SHORT CHIP	0	
JC753	1-216-296-11	SHORT CHIP	0	
		< COIL >		
L501	1-410-750-41	INDUCTOR	0.47uH	
L781	1-419-476-11	COIL, CHOKE	250uH	
		< TRANSISTOR >		
Q171	8-729-920-21	TRANSISTOR	DTC314TK-T-146	
Q181	8-729-920-21	TRANSISTOR	DTC314TK-T-146	
Q271	8-729-920-21	TRANSISTOR	DTC314TK-T-146	
Q281	8-729-920-21	TRANSISTOR	DTC314TK-T-146	
Q351	8-729-015-11	TRANSISTOR	2SD1802FAST-TL	
Q352	8-729-047-76	TRANSISTOR	FMC2A-T148	
Q353	8-729-900-53	TRANSISTOR	DTC114EK	
Q354	8-729-106-60	TRANSISTOR	2SB1115A	
Q551	8-729-027-23	TRANSISTOR	DTA114EKA-T146	
Q571	8-729-120-28	TRANSISTOR	2SC1623-L5L6	
Q581	8-729-900-53	TRANSISTOR	DTC114EK	
Q601	8-729-106-60	TRANSISTOR	2SB1115A	
Q602	8-729-900-53	TRANSISTOR	DTC114EK	
Q621	8-729-027-23	TRANSISTOR	DTA114EKA-T146	
Q622	1-801-806-11	TRANSISTOR	DTC144EKA	
Q631	8-729-047-76	TRANSISTOR	FMC2A-T148	

Ref. No.	Part No.	Description			Remark
		< RESISTOR >			
R1	1-216-809-11	METAL CHIP	100	5%	1/10W
R2	1-216-809-11	METAL CHIP	100	5%	1/10W
R12	1-216-841-11	METAL CHIP	47K	5%	1/10W
R13	1-216-845-11	METAL CHIP	100K	5%	1/10W
R21	1-218-867-11	METAL CHIP	6.8K	5%	1/10W
R101	1-216-817-11	METAL CHIP	470	5%	1/10W
R102	1-216-851-11	METAL CHIP	330K	5%	1/10W
R103	1-216-835-11	METAL CHIP	15K	5%	1/10W
R104	1-216-836-11	METAL CHIP	18K	5%	1/10W
R141	1-216-833-11	METAL CHIP	10K	5%	1/10W
R142	1-216-821-11	METAL CHIP	1K	5%	1/10W
R170	1-216-295-00	SHORT CHIP	0		
R174	1-247-807-31	CARBON	100	5%	1/4W
R175	1-216-841-11	METAL CHIP	47K	5%	1/10W
R176	1-216-295-00	SHORT CHIP	0		
R177	1-216-295-00	SHORT CHIP	0		
R179	1-216-809-11	METAL CHIP	100	5%	1/10W
R180	1-216-295-00	SHORT CHIP	0		
R184	1-247-807-31	CARBON	100	5%	1/4W
R185	1-216-841-11	METAL CHIP	47K	5%	1/10W
R186	1-216-295-00	SHORT CHIP	0		
R187	1-216-295-00	SHORT CHIP	0		
R189	1-216-809-11	METAL CHIP	100	5%	1/10W
R201	1-216-817-11	METAL CHIP	470	5%	1/10W
R202	1-216-851-11	METAL CHIP	330K	5%	1/10W
R203	1-216-835-11	METAL CHIP	15K	5%	1/10W
R204	1-216-836-11	METAL CHIP	18K	5%	1/10W
R241	1-216-833-11	METAL CHIP	10K	5%	1/10W
R242	1-216-821-11	METAL CHIP	1K	5%	1/10W
R270	1-216-295-00	SHORT CHIP	0		
R274	1-247-807-31	CARBON	100	5%	1/4W
R275	1-216-841-11	METAL CHIP	47K	5%	1/10W
R276	1-216-295-00	SHORT CHIP	0		
R277	1-216-295-00	SHORT CHIP	0		
R279	1-216-809-11	METAL CHIP	100	5%	1/10W
R280	1-216-295-00	SHORT CHIP	0		
R284	1-247-807-31	CARBON	100	5%	1/4W
R285	1-216-841-11	METAL CHIP	47K	5%	1/10W
R286	1-216-295-00	SHORT CHIP	0		
R287	1-216-295-00	SHORT CHIP	0		
R289	1-216-809-11	METAL CHIP	100	5%	1/10W
R301	1-208-812-11	RES-CHIP	18K	2%	1/10W
R302	1-216-845-11	METAL CHIP	100K	5%	1/10W
R303	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R304	1-216-835-11	METAL CHIP	15K	5%	1/10W
R305	1-249-393-11	CARBON	10	5%	1/4W
R306	1-216-849-11	METAL CHIP	220K	5%	1/10W
R331	1-216-797-11	METAL CHIP	10	5%	1/10W
R332	1-216-841-11	METAL CHIP	47K	5%	1/10W
R333	1-216-821-11	METAL CHIP	1K	5%	1/10W
R334	1-216-821-11	METAL CHIP	1K	5%	1/10W
R351	1-216-821-11	METAL CHIP	1K	5%	1/10W
R352	1-249-383-11	CARBON	1.5	5%	1/6W
R353	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R354	1-216-833-11	METAL CHIP	10K	5%	1/10W
R503	1-216-837-11	METAL CHIP	22K	5%	1/10W

MAIN **SUB**

Ref. No.	Part No.	Description			Remark
R507	1-216-809-11	METAL CHIP	100	5%	1/10W
R508	1-216-809-11	METAL CHIP	100	5%	1/10W
R509	1-216-809-11	METAL CHIP	100	5%	1/10W
R510	1-216-809-11	METAL CHIP	100	5%	1/10W
R511	1-216-833-11	METAL CHIP	10K	5%	1/10W
R512	1-216-845-11	METAL CHIP	100K	5%	1/10W
R513	1-216-833-11	METAL CHIP	10K	5%	1/10W
R514	1-216-809-11	METAL CHIP	100	5%	1/10W
R516	1-216-845-11	METAL CHIP	100K	5%	1/10W
R517	1-216-849-11	METAL CHIP	220K	5%	1/10W
R518	1-216-845-11	METAL CHIP	100K	5%	1/10W
R520	1-216-821-11	METAL CHIP	1K	5%	1/10W
R521	1-216-821-11	METAL CHIP	1K	5%	1/10W
R522	1-216-821-11	METAL CHIP	1K	5%	1/10W
R523	1-216-821-11	METAL CHIP	1K	5%	1/10W
R525	1-216-845-11	METAL CHIP	100K	5%	1/10W
R526	1-216-845-11	METAL CHIP	100K	5%	1/10W
R527	1-216-845-11	METAL CHIP	100K	5%	1/10W
R528	1-216-845-11	METAL CHIP	100K	5%	1/10W
R529	1-216-845-11	METAL CHIP	100K	5%	1/10W
R530	1-216-845-11	METAL CHIP	100K	5%	1/10W
R532	1-216-845-11	METAL CHIP	100K	5%	1/10W
R538	1-216-813-11	METAL CHIP	220	5%	1/10W
R542	1-216-833-11	METAL CHIP	10K	5%	1/10W
R543	1-216-845-11	METAL CHIP	100K	5%	1/10W
R544	1-216-845-11	METAL CHIP	100K	5%	1/10W
R545	1-216-809-11	METAL CHIP	100	5%	1/10W
R546	1-216-845-11	METAL CHIP	100K	5%	1/10W
R547	1-216-295-00	SHORT CHIP	0		
R549	1-216-295-00	SHORT CHIP	0		
R550	1-216-841-11	METAL CHIP	47K	5%	1/10W
R551	1-216-845-11	METAL CHIP	100K	5%	1/10W
R552	1-216-845-11	METAL CHIP	100K	5%	1/10W
R553	1-216-845-11	METAL CHIP	100K	5%	1/10W
R555	1-208-806-11	RES-CHIP	10K	0.5%	1/10W
R556	1-208-806-11	RES-CHIP	10K	0.5%	1/10W
R557	1-216-821-11	METAL CHIP	1K	5%	1/10W
R558	1-216-813-11	METAL CHIP	220	5%	1/10W
R561	1-216-849-11	METAL CHIP	220K	5%	1/10W
R562	1-208-806-11	RES-CHIP	10K	0.5%	1/10W
R563	1-216-809-11	METAL CHIP	100	5%	1/10W
R564	1-216-809-11	METAL CHIP	100	5%	1/10W
R568	1-216-295-00	SHORT CHIP	0		
R570	1-216-845-11	METAL CHIP	100K	5%	1/10W
R571	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R572	1-216-841-11	METAL CHIP	47K	5%	1/10W
R573	1-249-425-11	CARBON	4.7K	5%	1/4W
R576	1-216-849-11	METAL CHIP	220K	5%	1/10W
R577	1-216-841-11	METAL CHIP	47K	5%	1/10W
R580	1-216-809-11	METAL CHIP	100	5%	1/10W
R581	1-216-821-11	METAL CHIP	1K	5%	1/10W
R582	1-216-835-11	METAL CHIP	15K	5%	1/10W
R583	1-216-809-11	METAL CHIP	100	5%	1/10W
R584	1-216-295-00	SHORT CHIP	0		
R594	1-216-821-11	METAL CHIP	1K	5%	1/10W
R596	1-216-809-11	METAL CHIP	100	5%	1/10W
R601	1-249-401-11	CARBON	47	5%	1/4W
R602	1-249-401-11	CARBON	47	5%	1/4W
R603	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R604	1-216-833-11	METAL CHIP	10K	5%	1/10W
R605	1-249-401-11	CARBON	47	5%	1/4W
R606	1-249-401-11	CARBON	47	5%	1/4W
R607	1-249-401-11	CARBON	47	5%	1/4W
R625	1-216-805-11	METAL CHIP	47	5%	1/10W
R631	1-249-417-11	CARBON	1K	5%	1/4W
R632	1-249-417-11	CARBON	1K	5%	1/4W
R701	1-216-821-11	METAL CHIP	1K	5%	1/10W
R702	1-216-821-11	METAL CHIP	1K	5%	1/10W
R703	1-216-821-11	METAL CHIP	1K	5%	1/10W
R704	1-216-833-11	METAL CHIP	10K	5%	1/10W
R705	1-216-833-11	METAL CHIP	10K	5%	1/10W
R706	1-216-821-11	METAL CHIP	1K	5%	1/10W
R711	1-216-001-00	METAL CHIP	10	5%	1/10W
R716	1-216-821-11	METAL CHIP	1K	5%	1/10W
R717	1-216-821-11	METAL CHIP	1K	5%	1/10W
R718	1-216-821-11	METAL CHIP	1K	5%	1/10W
R719	1-216-821-11	METAL CHIP	1K	5%	1/10W
R720	1-216-809-11	METAL CHIP	100	5%	1/10W
R751	1-216-821-11	METAL CHIP	1K	5%	1/10W
R753	1-216-833-11	METAL CHIP	10K	5%	1/10W
R755	1-216-841-11	METAL CHIP	47K	5%	1/10W
R756	1-216-825-11	METAL CHIP	2.2K	5%	1/10W

< SWITCH >

S551	1-692-431-21	SWITCH, TACTILE (RESET)
S552	1-771-540-11	SWITCH, PUSH (1 KEY) (NOSE DETECT)

< THERMISTOR >

TH501	1-803-350-21	THERMISTOR, POSITIVE

< TUNER >

TU1	A-3220-812-A	TUNER UNIT (TUX-020)

< VIBRATOR >

X501	1-795-134-11	VIBRATOR, CRYSTAL (18.432MHz)
X502	1-567-098-41	VIBRATOR, CRYSTAL (32.768kHz)

****

*	1-676-603-21	SUB BOARD

****

< CONNECTOR >

CN801	1-794-064-12	SOCKET, CONNECTOR 14P

< LED >

LED801	8-719-061-16	LED CL-190SR-CD-T (TAPE DECK ILLUMINATION)

< SWITCH >

LSW801	1-771-883-11	SWITCH, TACTILE (WITH LED) (⏏)

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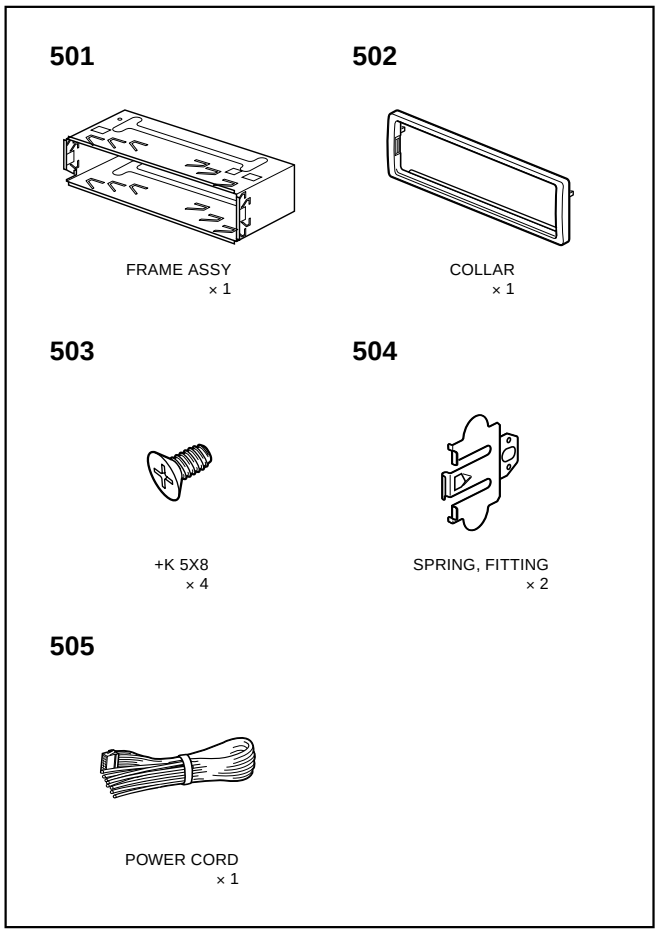
Ref. No.	Part No.	Description	Remark
		MISCELLANEOUS	
		**********	
2	1-792-195-11	CABLE, FLEXIBLE FLAT (14CORE)	
20	1-776-206-21	CORD (WITH CONNECTOR) (POWER)	
53	1-694-882-11	CONDUCTIVE BOARD, CONNECTION	
F781	1-532-877-11	FUSE (BLADE TYPE) (AUTO FUSE) (10A/32V)	
HP901	1-500-157-21	HEAD, MAGNETIC (PLAYBACK)	
LCD901	1-804-621-12	DISPLAY PANEL, LIQUID CRYSTAL	
M901	A-3291-665-A	MOTOR ASSY, MAIN (CAPSTAN/REEL)	
**********			
		ACCESSORIES	
		**********	
	1-477-110-33	WIRELESS REMOTE COMMANDER (RM-X119)	
	3-248-252-11	MANUAL, INSTRUCTION (ENGLISH, FRENCH)	
	3-248-256-11	MANUAL, INSTRUCTION INSTALL (ENGLISH, FRENCH)	
	3-230-047-01	HOLDER, BATTERY (for RM-X119)	
**********			
		PARTS FOR INSTALLATION AND CONNECTIONS	
		**********	
501	X-3381-409-1	FRAME ASSY, FITTING	
502	3-236-447-02	COLLAR	
503	3-934-325-01	SCREW, +K (5X8) TAPPING	
504	3-233-644-02	SPRING, FITTING	
505	1-776-206-21	CORD (WITH CONNECTOR) (POWER)	



REVISION HISTORY

Clicking the version allows you to jump to the revised page.
Also, clicking the version at the upper right on the revised page allows you to jump to the next revised page.

Ver.	Date	Description of Revision
1.0	2002.12	New